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A Clinical Lecture

ON

HYSTERICAL SKIN SYMPTOMS AND ERUPTIONS.

Delivered at the West-End Hospital for Diseases of the Nervous System,

BY THOMAS D. SAVILL, M.D. LOND.,

PHYSICIAN TO THE WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM AND TO THE ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN.

GENTLEMEN,—The skin symptoms of hysteria, other than sensory changes, with which I do not propose to deal on the present occasion, have not attracted the attention they deserve. They are, however, of great importance, first, because we can very often see them for ourselves in a manner which cannot be done in many of the other symptoms of hysteria; and, secondly, these same lesions which we see upon the surface of the body may, as I pointed out on a previous occasion, also take place in the central nervous system and other parts in the interior of the body and produce many and various hysterical symptoms according to the part involved. I have met with seven different kinds of hysterical skin symptoms: (1) attacks of generalised pallor of the surface; (2) attacks of flushing; (3) fugitive localised patches of congestion suddenly appearing and disappearing; (4) dermatographia; (5) acroparæsthesia and erythromelalgia; (6) urticarial, erythematous, and hæmorrhagic exudations; and (7) localised ischæmia. The first three are quite peculiar to the emotional vaso-motor neurosis, as I regard it, which we call hysteria. The other four are far more often met with in hysterical than in non-hysterical subjects. Some observers consider the fourth and the seventh as special to hysteria but I prefer to regard all the last four skin conditions as an expression of a vaso-motor neurosis *plus* a toxæmia in varying proportions. All of these, I believe, are specially related to hysteria. Other skin diseases are without doubt influenced or modified by it, and Dr. Paul Briquet,[1] an analytical observer of great power, made the following important remark: "On sait quelle puissante influence les passions, et surtout le chagrin, les préoccupations et la contention de l'esprit, ont sur la production des maladies de la peau, et principalement sur celle des acnés, de la mentagre, et des ecthymas." This indirect influence very probably depends on the marked tendency in these subjects to vascular changes in the skin, but we shall only be concerned to day with those I have named.

1. *Attacks of pallor* of the surface generally accompany or alternate with some of the hysterical cerebral attacks which we have discussed on previous occasions.[2] Sometimes attacks of pallor occur alone, without cerebral manifestations of any kind, sometimes they alternate with flushings. Their explanation has already been fully dealt with. They are parts of what I have ventured to call "splanchnic storms" which are so common in hysteria and which, starting with an emotional disturbance, result in sudden dilatation of the splanchnic vascular area and consequent anæmia of the brain or the skin or, more frequently, of both.

2. *Attacks of flushing*, morbid blushing, and "flush storms" affecting part or the whole of the body are met with in all hysterical patients. They are, in my experience, the most important of the stigmata of the hysterical diathesis and are one of the evidences of the vaso-motor instability, central and peripheral, which must be regarded as the essential somatic part of that diathesis. They are met with in all women at the menopause—at which time, by the way, the patient is often described as "hysterical"—but they occur throughout life from time to time in subjects of the hysterical diathesis. Dr Harry Campbell[3] has dealt so ably and so thoroughly with these morbid blushings and their pathology that I can add nothing to his admirable work. Speaking of their pathology he says: "For me, then, a so-called flush belongs to a very comprehensive class of nerve storm, closely allied to, and, in fact, sometimes indistinguishable from, an epileptic or an hysterical aura and starting like them in a nervous level situated high up, possibly even in the highest level, the parts ('nervous arrangements') involved being more particularly those which represent the organic viscera—above all, the thoracic viscera. The representatives of these parts in the highest centres constitute the chief physical basis of the emotions; and in women—in whom the emotional element is most fully developed—they are peculiarly unstable and liable to explode." Thus Dr. Campbell and I are practically in accord. An emotional state, he says, is the determining cause and this acts on the visceral nervous apparatus, sometimes on that in the thorax and sometimes on that in the abdomen. This is the same mechanism as that which I have just described to you. There is a sudden oscillatory dilatation or constriction of a visceral vascular area (splanchnic or thoracic), initiated in most cases by an emotional condition in the brain, and this is attended by a corresponding constriction or dilatation of the surface vessels. This same kind of storm can in some patients be determined by pressure on the peripheral terminations of the ilio-inguinal nerve (so-called "ovarian" region) which is in very close relation with the solar plexus.

3. Small, extremely fugitive *patches of congestion*, more or less abrupt in outline and localised to parts usually pale, such as the front or side of the neck, may be seen by any close observer in a great many patients who are subjects of the hysterical diathesis. Here, for instance is a note—one of many—made in my private case-book concerning a woman, aged 36 years, who consulted me for attacks of tremor of the hands, palpitation, associated with what she described as "bursting attacks," and other symptoms, all of entirely hysterical origin. While I was percussing her chest two or three patches of congestion varying in size from that of a threepenny-piece to that of half-a-crown appeared suddenly on both sides of the back and front of the chest, not raised above the surface, not fading into the surrounding skin like a blush on the face, but terminating abruptly with an irregular outline like that of a map of Europe, disappearing under pressure and passing away in a few minutes as suddenly as they came. She stated that she had been liable to these patches whenever she was nervous for as long as she could remember and her relatives had noticed them. I have often pointed out such fugitive patches in our hysterical patients occurring just below the ears, which seems to be their favourite situation, but they may occur anywhere. Their chief importance lies in the fact that they are definite and visible evidences of the abnormal reflex excitability of the vaso-motor centres. Just as in the flush storms we were considering the visceral vaso motor centres of the thorax or the abdomen are affected, so do these localised congestions depend on an abnormal irritability of the peripheral vaso-motor centres.

4. *Dermatographia* is a congestive streak which appears after a few seconds in the track of a scratch on the skin with some blunt article such as the top of a penholder. If an urticarial streak also appears it amounts to urticaria factitia. The latter we shall discuss shortly under exudative conditions. Dermatographia is regarded by some as of hysterical origin and a stigma of the hysterical diathesis, but others regard it as toxic. The latter is certainly not always true as in cases where the *sight* of an article of food which had previously produced urticaria determines an attack. The truth probably lies between these extremes. My own experience is that these streaks can be produced in both hysterical and non-hysterical persons, though much more frequently and more readily in the former. My belief is that they generally indicate the presence of toxæmia, very often of gastro-intestinal origin, or some other cause of irritability of the nervous system. The "tache cérébrale" which Trousseau described as indicative of cerebral meningitis as distinct from enteric fever is dermatographia. Very generally some kind of toxæmia can be revealed, but a neuro-vascular irritability is the essential factor in the causation, either acquired as in tache cérébrale, or congenital and innate in the hysterical diathesis.

5. *Acroparæsthesia* (sensations of tingling, &c., in the extremities occurring for the most part in attacks) and *erythromelalgia* (redness and swelling of the extremities which, though paroxysmal, is more chronic in its duration)

[1] Traité Clinique et Thérapeutique de l'Hystérie, par le Docteur Paul Briquet, p. 206. Paris, Baillière et Fils. 1859.

[2] THE LANCET, June 1st, 1901, p. 1513.

[3] "Flushing and Morbid Blushing," by Dr. Harry Campbell, p. 123, London. H. K. Lewis. 1890.

have been already fully described.[4] They are most frequently met with in hysterical subjects and in the female sex, though they may be associated with other diseases. Out of a series of 45 cases (seven males and 38 females) which I have recently observed and of which a previous history was obtainable, 39 cases (five males and 34 females) presented either evidences or a history of hysterical manifestations. Similarly attacks of deadly white pallor of the fingers are more common in hysterical subjects.

6. *Exudative skin conditions* are almost, if not quite, as closely related to hysteria as are the last two skin conditions, strange as it may appear at first sight. Nevertheless, such disorders as urticaria, erythema, and localised circumscribed œdema are met with far more frequently in hysterical than in non-hysterical subjects, and though it is not sufficiently known may be determined purely by emotion, as in cases which I shall show you directly. Evidences of the hysterical diathesis can be revealed in between 85 and 90 per cent. of my hospital cases of urticaria factitia, erythema (all kinds), and circumscribed œdema taken collectively. There are three degrees of dermal exudation—serous effusion, consisting of lymph only, as in urticaria; sero-sanguineous effusion, in which some of the blood corpuscles also escape from the blood-vessels, as evidenced by a certain degree of staining, as in chilblains or erythema nodosum; and purpuric effusion of all the blood elements. In regard to the etiology of these exudations I quite agree that they are very often in the main due to some alteration in the blood of an auto- or hetero-toxic kind. But I hold—and shall show you cases in proof—that they may also be dependent, at any rate in many instances, entirely or in large part on nervous (neuro-vascular and emotional) influences. And that is why these diseases are in general terms met with more commonly in the female, in hysterical and nervous subjects, in direct association with other neuro-vascular symptoms, and exhibit the same fugitive and other characters which other hysterical phenomena do. I do not wish to claim all exudative skin conditions as solely of nerve origin—far from it—but there are at least three ways in which they may be produced: (1) by chemical changes in the blood; (2) by nervous influences (neuro-vascular and emotional); and (3) by a combination of the two preceding causes. It is to this last class that I believe the majority of exudative skin conditions belong. When we come to deal with the etiology of hysteria I shall on a future occasion indicate what a large and important part gastro-intestinal conditions, especially such as result in autotoxis, play in the causation of all hysterical manifestations. This is important because if I am correct it brings the etiology of the two morbid conditions—exudative skin conditions and hysteria—more or less into line.

(*a*) Urticaria is the best known type of the *serous exudations*. It is in the great majority of instances traceable to an autotoxis of gastro-intestinal origin, but it may be also produced by emotion—with and even without any gastric disturbance. Dr. A. E. Wright at a discussion at the Medical Society of London[5] remarked that there was certainly a nervous influence in the exudative processes in the skin, and mentioned the case of a young surgeon who could produce an attack of urticaria at will by fixing his mind on the subject. A case of recurrent urticaria is referred to by Dr. Stelwagon,[6] where the condition was traceable to eye-strain. Dr. Stelwagon, writing of the etiology of urticaria, says: "The action of nervous influence, direct or indirect, is shown in a case [of urticaria] reported by Oliver, where the eruption was due to eye-strain, persisting or recurring when a change in lenses was necessary; his patient had been the subject of frequently recurring attacks for years, but after suitable fitting of glasses for diminishing vision full relief ensued; if not worn constantly the eruption would return, to disappear upon resuming their use; later the return was again persistent and was found due to vision changes requiring new lenses; on one occasion a mistake was made by the optician and the eruption again appeared." Professor M Call Anderson[7] writes, under the causes of urticaria: "In some persons mental emotion is sufficient to call it forth, such as an excess of joy or grief. ..... Some remarkable cases of this kind have been reported by Alibert. He once saw a young woman who could not enter a drawing-room without having the whole skin covered with nettle-rash, so much so that she could not dance or enjoy any other recreation; and an ecclesiastic who could not celebrate divine service because the eruption immediately came out and caused him to scratch himself with the greatest violence." Dr. H. Radcliffe Crocker[8] states: "Everything in urticaria points to its being primarily a vaso-motor disturbance, direct or reflex, central or peripheral." He also refers to the emotional element in urticaria, particularly in the chronic or recurrent variety; and he mentions the case of "a woman in whom the advent of strangers produced urticaria and this sensitiveness increased until a knock or ring at the front door would determine an immediate outbreak."

Many other instances could be mentioned, but here is a case, which I am fortunately able to show you, of urticaria produced entirely by emotion. The little boy, aged eight and a half years, who was sent to me by Dr. M. Emin, had to be taken away from school eight or nine weeks ago because of the round raised wheals which appeared on the face and upper part of the trunk whenever he worried over his lessons or was teased by the other boys. In the evening an effort to learn his lessons will produce an attack and then the irritation prevents his making any further attempt. Any emotion or source of nervousness will cause the eruption to appear. His skin, which five minutes ago was quite clear, is now, you observe, without having been touched in any way, covered with numerous small wheals owing to his nervousness in coming before us (Fig. 1). The spots consist of circular definitely raised urticarial patches of about the size of millet seeds or split peas surrounded as usual by a zone of congestion. The face and upper half of the trunk are alone affected.

FIG. 1.

A case of urticaria in a boy, eight and a half years of age, due to emotion.

[4] THE LANCET, June 1st, 1901, p. 1513.
[5] THE LANCET, Oct. 31st, 1903, p. 1235.
[6] Stelwagon: Diseases of the Skin, p. 168. London and Philadelphia: Saunders. 1902.
[7] A Treatise on Diseases of the Skin, p. 268. London: Griffin and Co. Second edition.
[8] Diseases of the Skin, pp. 128 and 129. London: H. K. Lewis. 1903. Third edition.

These attacks last about from one to three hours if the emotional cause is removed. His mother says that he is an extremely nervous, excitable, and sensitive child. His gastro-intestinal functions are perfectly normal.

Here is a case of urticaria factitia (urticaria produced by pressure) but nevertheless one which can also be determined by emotion. The patient, now aged 16 years, was first brought to me four years ago at the age of 12 years, complaining that for the last month whenever she "washed her face in the morning it swelled and wheals came out"; the same appearances came on the body. She was noted as being a very nervous child, easily startled, and crying very easily. A descending constant current to the spine was ordered and compound infusion of gentian and she recovered in a couple of months, remaining well till six or eight months ago. She now comes complaining that "her face and other parts come up very red and swelled when she feels nervous or is worried about her work, or when the parts are touched."

The disease known as localised circumscribed œdema (giant urticaria, Quincke's disease, angioneurotic œdema), another serous exudation, though connected by some of the older authors with gastro-intestinal disturbance, is now admitted by others to be an angioneurosis. That the attacks may be determined by emotional or angioneurotic conditions is evidenced by the following case which I am able to show you. The patient is a single woman, aged 35 years, and she has for the past nine months been troubled with localised œdematous swellings on the face every three or four weeks—namely, just before or just after the catamenial period, when she is also subject to nervous derangements which are not unusual at such times. The swellings vary

FIG. 2.

Angioneurotic œdema in a boy aged six years.

in size from that of a Barcelona nut to that of a walnut, are pinkish white in colour, and give rise to much irritation. They are specially prone to affect the eyelids (as shown in Fig. 2, which illustrates the next case), sometimes symmetrically, but they also occur on other parts of the face and occasionally in other parts of the body. At times they vanish in an hour or two but may remain for a day. She has neither indigestion, constipation, nor any other abdominal abnormality and is at the present time in perfect health except for this troublesome condition. She had "anæmia" as a girl and was subject to nervous attacks from time to time. Calcium chloride has only given her partial relief and now I propose to try ichthyol and bromide of ammonium. In this case there is not the slightest evidence pointing to any change in the blood or blood vessels. The main cause must surely act through the neuro-vascular apparatus, and the flushing which is so common in these subjects, especially at the catamenial period, takes the form in her of localised œdema. The sudden onset and sudden disappearance of the lesions, without leaving a trace behind them, also support this view.

Here is another example of the same disease occurring in a child, six years old, who was sent to me by Dr. Evan Evans. This picture (Fig. 2) shows an œdematous swelling of his upper eyelids which came on quite suddenly and spontaneously and disappeared equally as suddenly next day. He has had similar swellings across the face (when his features become unrecognisable), the scrotum, the hand, and elsewhere, coming on in the same mysterious way. This little boy has also had attacks of purpura from time to time so that there probably exists in him a defect in the blood as well as the neuro-vascular

FIG. 3.

Erythema gyratum in a woman 22 years of age.

defect. Professor William Osler[9] has found that cases of angioneurotic œdema are sometimes benefited by the prolonged administration of small doses of trinitrin—another fact pointing to their neuro-vascular origin.

Hysterical œdema was described by Sydenham[10] in 1681 as one of the symptoms which might be associated with hysterical attacks. He also referred to hysterical swelling of the ankle, which differed, he said, from dropsical swelling involving one ankle only, not pitting on pressure, and being greatest in the morning instead of in the evening. Sir Benjamin Brodie[11] refers to the diffuse pale swelling of a limb which may follow prolonged hysterical pain in the part. Professor J. M. Charcot[12] in addition to the œdème blanc des hystériques, gives a very lucid description of a congestive form of hysterical œdema (œdème bleu), in which the swollen parts are cyanosed, cold, and exhibit scattered spots of red. In one of his cases the condition could be reproduced by means of hypnotism. It is probable that all the conditions described by these princes among clinical observers belonged to the same angioneurotic œdema which is met with largely if not exclusively among hysterical and nervous persons.

(*b*) *Sero-sanguineous exudation* is but a transitional form of the preceding, as may be seen, for example, in the two

[9] Osler: Principles and Practice of Medicine, p. 1141. London, Kimpton. 1901.

[10] Processus Integri, chapter 3, paragraph 2, and Epistolary Dissertation to Dr. Cole, paragraph 69. Works of Thos. Sydenham, M.D.; New Sydenham Society, London, 1850.

[11] Lectures Illustrative of Certain Local Nervous Affections, by Sir Benjamin Brodie. Longmans and Co. 1837.

[12] Clinique des Maladies du Système Nerveux, pp. 110 and 120. By Professor J. M. Charcot et M. Georges Guinon. Paris. 1892.

varieties of hysterical œdema described by Professor Charcot. Its best illustrations are to be met with among the erythemata. Erythema nodosum, for instance, one of the best known forms of erythema, is almost confined to young hysterical women with menstrual irregularities. I have frequently pointed out how often a history of this disease and erythema pernio (chilblains) is revealed in hysterical subjects and *vice versâ*, both the erythema and the hysteria being, in my view, indications of the morbid instability of the neuro-vascular centres. Erythema multiforme (including erythema annulare, erythema iris, erythema marginatum, erythema gyratum, and even erythema vesiculosum and bullosum, in which the exudation is sufficiently pronounced to produce vesicles and bullæ) is very generally regarded as either angio-neurotic or neuro-toxic in origin.[12] Its occurrence chiefly in young women, the strange way in which it comes and goes, and the associated phenomena, all point to the correctness of this view. In a good number of cases of erythema multiforme the exudation is only serous and it leaves no staining, as in this case of a young woman, aged 22 years (Fig. 3), who suffers from constantly recurring, somewhat fugitive, attacks of erythema gyratum on both forearms, especially when she is "upset" or nervous. You will note the symmetry and the associated hysterical phenomena. But in most cases the exudation is sero-sanguineous and the staining is more or less distinct. For instance, in this woman, aged 45 years, who is at the climacteric and who suffers from a widespread eruption of what is sometimes called purpuric erythema, the staining is very marked. I should also like to show you a boy suffering from a relatively rare disease, urticaria pigmentosa (of Sangster), in whom the associated hysterical features, both personal and hereditary, are sufficiently obvious. It is a condition closely allied to the foregoing, which appears in successive crops of urticaria, leaving behind them marked and persistent staining of a purpuric type. The patient is five years of age, and you will see that his body, limbs, and neck are covered with brownish-purple stains of different shades corresponding to their age. His mother tells us that "spots like nettle-rash" have been coming out in successive crops attended by a good deal of irritation ever since he was a few months old, and that they leave these stains, which very gradually fade away (Fig. 4). This little boy has once or twice passed blood in his stools and has had bleedings from the nose, so there probably exists in his case the dual cause of which I have spoken (hæmic and neuro-vascular). He is a very nervous and emotional child, his tears (his mother says) "are very near the surface" and he has attacks of extreme irritability of temper in which no one can do anything with him. At these times the spots are worse and even the face becomes affected. His mother has had "hysterical attacks" all her life, which have been especially marked during her pregnancies. There is said to be a "tendency to rashes" in the two other children but I have not seen them.

FIG. 4.

Case of urticaria pigmentosa in a boy five years of age.

(*c*) *Hæmorrhagic* or *purpuric effusions* have a less constant and less certain causal relationship with hysteria than any of the preceding, but it exists. I have notes of several cases where spontaneous hæmorrhage occurred from the ears, nose, or other mucous surfaces, as part of a hysterical seizure while the patient was under observation. Subcutaneous hæmorrhages have been described by several authors.[13] A recent case of "black chromidrosis with hysterical paralysis" described by Dr. Putnam of New York[14] probably comes under the category of hæmorrhagic effusion associated with secretory perversion. In this patient ink-black spots appeared on the skin whenever she was tired, and this condition and the associated hysterical paralysis which had lasted 14 months only cleared up when she went into the country. The taches and spontaneous hæmorrhages in the religious votaries of the Middle Ages were probably instances of hysterical hæmorrhage.

7. *Localised ischæmic conditions*—i.e., where there is a constriction of the arterioles of a given area, of one limb for example—are recognised by many observers among the manifestations of hysteria. For instance, Dr. J. A. Ormerod, in Professor Clifford Allbutt's System of Medicine, says: "Hysterical patients may present curious symptoms in the domain of the arterioles and capillaries. Limbs that are paralysed or anæsthetic may exhibit also 'ischæmia'; that is to say, when cut or pricked they bleed less freely than normally, or not at all. This is commonly ascribed to a vaso-motor spasm."[15] I think it is not sufficiently recognised that this ischæmic condition, using the term to mean spasm of the arterioles, may also occur quite independently of true paresis or true anæsthesia. The patient may complain of a "heaviness" or immobility of a part, yet there may be no actual loss of power. She may describe her abnormal sensations as a

[12] Vide Dr. Stelwagon: Diseases of the Skin, p. 142. London and Philadelphia: Saunders and Co. Mr. Malcolm Morris (Diseases of the Skin, p. 102) Dr. Schwimmer (Die Neuropathischen Dermatonosen, p. 101), and Dr. Lewin (Berliner Klinische Wochenschrift, No. 23, 1876) consider it to be purely an angioneurosis. Dr. Radcliffe Crocker (loc. cit.) appears to regard it as inflammatory.

[13] Gilles de la Tourette, Nouvelle Iconographie de la Salpêtrière. Paris, 1890.

[14] New York Medical Journal, July 4th, 1903, p. 26.

[15] A System of Medicine by Many Writers, edited by Thomas Clifford Allbutt, vol. viii., p. 112.

"numbness" or "prickling," yet she can feel when the part is touched and the more intelligent patients will tell you so spontaneously. The skin, when we are able to see it, may be normal in colour or it may be of waxy whiteness, especially when the end of a limb, as frequently happens, is mainly affected. The symptoms often start at the end of an extremity and spread upwards: sometimes all one side of the body is affected. The symptoms are always more or less transient and may be extremely fugitive. Sometimes they are associated with what I have described as hysterical cerebral attacks (Group A) or other hysterical manifestations, sometimes they occur alone, and sometimes, as in the following case, they are severe enough to constitute an attack in themselves. The clinical features of these symptoms—their transient nature, the pallor of the skin occasionally observed, the relative bloodlessness—stamp them undoubtedly as a vaso-motor spasm of the arterioles.

This patient, a single woman, 27 years of age, an extremely intelligent person, is suffering from what I believe to be ischæmic attacks of hemiplegic distribution. She gives us a lucid and typical history of the emotional and vaso-motor neurosis which we call hysteria. The hereditary taint is well marked. She herself was nervous and excitable as a child but studied her lessons well and was generally top of her classes. She volunteers the statement: "All my life I have been very liable to flush even when I was anæmic." Her history presents many dermal and circulatory symptoms. As a girl her hands used to become "red, mottled, and swelled in places, resembling chilblains, excepting that they were worse in summer than in winter." She was affected with what her medical attendant called "erythema nodosum" on the legs when she was 12 years of age and at 13 years began to menstruate. From that time until a year ago she has been subject to attacks of hysterical globus. Asked to describe them she says: "I first get very pale and the heart beats violently, than I get a sinking in the stomach which rises to the throat like a ball." She has also had attacks of violent palpitation without the globus and *vice versâ*, and other hysterical attacks, some of a syncopal type (Group A) All these attacks were more frequent at the menstrual period or when she was out of health, and were all determined by the slightest excitement. 12 months ago these attacks almost ceased but they were replaced by others of a worse kind, though they are started by exactly the same causes as the globus, flushings, tachycardia, and other hysterical attacks. It is for these that I am consulted. In these a "numbness" or "dead feeling" (sometimes accompanied by "prickling of pins and needles") starts in the left thumb and "rushes down the left side like a wave into the leg," on one or two occasions spreading to the opposite side. She states that she can feel things when the affected parts are touched. "The throat," she says, "feels swollen and the left half of my tongue feels numbed so that I cannot move it. A stupid kind of dazed feeling then comes over me, so that I cannot speak, though I know what is going on around me." The whole attack lasts from five to 15 minutes and it is generally followed by a splitting headache on the left half of the head, lasting some hours and only relieved by sleep. She has had an average of two or more of these attacks a week of varying severity. On one occasion I had the opportunity of witnessing one of these attacks. The left hand was pale and bloodless and when pricked with a needle did not bleed; she could feel with that hand, though not so well as with the other. One of these attacks, caused by running after and missing a train, was attended by distinct mental symptoms. She took the next train and while in it another severe attack came on. When met by her friends at her destination she was stated to be "delirious," doing and talking "silly things." This lasted an hour or two; then the mental confusion passed off as suddenly as it had come and she did not remember any of the silly things she had previously said or done. These seizures had given her much anxiety because her mother died at the age of 49 years from "paralysis after a stroke."

This patient presents the hysterogenic phenomenon to a certain extent and on one or two occasions I have succeeded by pressure in the inguinal region in reproducing one of the "throat attacks" and the tachycardia but not a complete attack of the "numbness." The organs are healthy, but all the superficial and deep reflexes are considerably exaggerated. I should like, just in passing, to refer to the treatment. On June 1st she commenced to take a mixture containing small doses of nux vomica and 15 grains of ammonium bromide thrice daily but she made very little improvement. On July 9th, her digestion being rather out of order, she took a mixture containing bicarbonate of sodium and gentian, with ammonium bromide as before, but there was only very slight improvement. On August 13th she commenced to take thrice daily 15 grains of calcium chloride and 15 grains of ammonium bromide, and the improvement was immediate and marked. Prior to August 13th she had been having attacks daily but for the past six weeks she has not had a single one. She was taking bromide all the time but the effect of the calcium chloride was almost magical. The fact of my having found this remedy useful in various forms of erythema induced me, in view of her history, to try it in her case. It is a most interesting one. Throughout life she has had unmistakeable hysterical attacks of various kinds—globus hystericus, tachycardia, and syncope. In early life she was troubled with various skin symptoms of a congestive and erythematous type, which we have seen are so frequent in hysterical subjects. She has had several kinds of unmistakeably hysterical seizures. Latterly these have been replaced by attacks of hemiplegic "numbness" or dead feelings, starting in the left thumb, without loss of sensation and attended by pallor and bloodlessness—determined by the same causes as the other attacks. There can be no reasonable doubt that these latter attacks are also hysterical and are due to a widespread vaso-motor spasm starting from the centre controlling the vascular area of the left arm and spreading to the vaso-motor centre or centres of the left half of the body and head. At one stage of her history the vaso-motor phenomena were apparently of a paralytic kind (vascular dilatation, congestion, and exudation); at another stage of an irritative kind (constriction and angiospasm).

Reviewing the pathology of the seven skin conditions we have been considering it seems clear that the first two (generalised pallor and flushings) are part of the "splanchnic storms" which form an integral part of hysteria. The third (the congestive patches) constitute visible evidences of the reflex excitability of the local vaso-motor mechanisms which also form part of the same disorder. The fourth, fifth, and sixth (dermatographia, acroparæsthesia, and exudative skin conditions) are products, in widely varying proportions, of this same reflex and emotional excitability *plus* hæmic changes. The seventh (ischæmia) owns the same pathology but is manifested as a vascular spasm only. Among the cooperating causes sometimes in operation may be mentioned toxins of gastro-intestinal origin, articles of diet, traumatism, toxins of insects, and other causes to be considered hereafter. But without the vaso-motor instability, innate—i.e., hysterical—or acquired, these cannot act.

RESEMBLANCES OF THE SKIN TO THE CENTRAL NERVOUS SYSTEM.

I have entered at this length into hysterical skin symptoms and eruptions because, in the first place, I believe that the slighter and more transient pallor and congestions included in the first three classes above referred to are often overlooked and are hardly sufficiently recognised as part and parcel of the hysterical diathesis. They are, in my experience, veritable stigmata of hysteria. Secondly, I hope I have demonstrated that serous and sero-sanguineous effusions—urticaria, erythromelalgia, erythemata, ischæmic spasm, and even hæmorrhage—may be produced by the same emotional and other causes which determine undoubted hysterical manifestations and that these effusions depend in part or *in toto* on the neuro-vascular irritability and irregularity which form, in my view, the essential element of hysterical conditions. In committing myself to this statement I do not wish to exclude the toxic or blood factor in the causation of these effusions. In fact, a toxic or nutritional element can very often be revealed in these dermal effusions, *just as it can be in hysterical motor and sensory disorders* (Groups B and C) *and in hysterical visceral attacks* (Group D). It is a question of dual causation and the two factors are met with in different proportions in different cases. Congestion, pallor, and ischæmic spasm may be, and generally are, of purely neuro-vascular (angioneurotic) and emotional origin, hæmorrhage may be purely toxic, while in serous and sero-sanguineous effusions the two factors are nearly always combined. In the third place, I hope to prove to you hereafter that these same lesions, pallor, flushing, congestion, exudation, ischæmia, and possibly even hæmorrhage, which we can see on the skin, may in like circumstances be determined in the central nervous system and other places and give rise to hysterical motor, sensory,

visceral, and other symptoms, thus explaining one of the leading features of that strange disorder—namely, its "mimicry" of organic disease. It is as true to-day as it was in 1682, when Sydenham wrote, "Whatever part of the body it [hysteria] attacks it will create the proper symptom of that part. ..... Few of the maladies of miserable mortality are not imitated by it."

Fourthly, it is, however, in relation to the central nervous system that the best marked, the strangest, and the most definitely hysterical symptoms appear; and I should like, in conclusion, to indicate the marked resemblances—embryonic, physiological, and pathological—which exist between the integument and the central nervous system, structures which at first appear so different from one another. The first and most fundamental change which takes place in the development of the embryo is the arrangement of its cells into three distinct layers, the epiblast, hypoblast, and mesoblast. Now, from the epiblast both the tegumentary covering of the body and the central nervous system are developed. The central nervous system is formed solely by an infolding of the superficial cells of the embryo which afterwards form the skin; and these are the only two structures of the body which are developed from the epiblast. The physiological resemblance is to be found in the fact that whereas the skin with its tactile corpuscles, the eyes and other external sense organs (developed from the epiblast) represent the external projection of the sensorium, just as the central nervous system represents the internal projection of the sensorium. A consideration of syphilis affords a striking illustration of their pathological resemblance, for this disease is specially apt to affect both the skin and the central nervous system in preference to, though not to the exclusion of, the other parts of the body. Undoubtedly the places in which to study syphilis are in a skin and in a nerve clinic—and these, if I mistake not, are also the best places in which to study hysteria.

Oration

ON

THE SANATORIUM TREATMENT OF PULMONARY TUBERCULOSIS.

Delivered at the Opening Meeting of the Reading Pathological Society on Oct. 15th, 1903,

BY C. THEODORE WILLIAMS, M.A., M.D. OXON., F.R.C.P. LOND.,

CONSULTING PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

GENTLEMEN,—I think we shall all agree that the introduction of sanatorium and hygienic treatment into the therapeutics of pulmonary tuberculosis has proved an undoubted boon to sufferers from that complaint, and while it has gone far to arrest the disease in initial cases it has also done much to mitigate the sufferings and to reduce the symptoms of the advanced cases and has given a very different aspect to the wards of consumption hospitals and Poor-law infirmaries. For the efficient treatment of consumption the first step is the separation of the consumptives from the healthy and their housing, not in the wards of a general hospital, as is still done in many continental hospitals the authorities of which ought to know better, but in separate buildings, the incipient cases in sanatoriums and the advanced cases in consumption hospitals with more complete arrangements for nursing and special treatment. It is the proud boast of this country that England was the first to recognise this important doctrine and to build consumption hospitals for the special treatment and study of such cases and this was done without reference to infection theories. At least four hospitals were established in London before it entered into the heads of our foreign neighbours to attempt anything of the sort.

Now it is generally recognised that consumptives should be separated, partly to prevent their infecting the healthy and partly because the open-air system, which for them is essential, is not suited to all kinds of disease. With the chief features of the open-air system you are all probably familiar and I do not propose to describe it in detail but to select certain points and on these to offer remarks based on personal experience and a careful examination of many sanatoriums and their arrangements. I may claim to have visited the principal sanatoriums of Germany, Switzerland, Sweden, and Denmark, as well as many in this country, and I am a member of the building committees of three sanatoriums, two of which are in course of construction, and I consequently have had some opportunity of gaining experience in the subject. I will first say a few words on sanatorium construction. It is not necessary to erect a building of great architectural pretensions or of a very solid character. Some sanatoriums which are apparently of great utility consist of a series of huts or one-storeyed cottages constructed of wood for sleeping rooms with a larger hut for dining room and kitchen. Such are the Docker huts in Germany and those of Dr. Denton Johns at Parkstone, near Bournemouth, and the Adirondack cottage sanatoriums in the United States, and some authorities prefer these to more permanent structures on account of their cheapness and of their necessitating an open-air life. But in bad weather there are difficulties, especially of service, and another trouble is the danger of fire. It has been found by experience that completeness of arrangement and organisation cannot be arrived at without solid and permanent buildings and the following may be regarded as essential elements of a well-organised institution as exemplified in all first-class European sanatoriums.

1. A block of two storeys or more facing south or south-east, containing the patients' bedrooms and the day rooms, with a corridor behind, out of which on the north side would open the sanitary towers containing bathrooms, water-closets, and slop-sinks; while in the basement would be the hydro-therapeutic department.

2. A block behind the first and connected with it, containing the dining rooms, kitchens, and on one side the medical officers' consulting rooms, sleeping rooms, and laboratories, and on the other the matron's and nurses' quarters.

3. An administration block placed at some distance from the first two to avoid noise, taking in the laundry, heating apparatus, electric plant, and the disinfector and other machinery and the mortuary.

4. An isolation block.

5. Medical superintendent's house. In most sanatoriums of any size there are three medical officers and the head physician usually has a house apart in the sanatorium precincts.

6. The Liegehallen or shelters. These can be connected with the patients' block or placed in front of the basement and form part of it, but they must not be placed in front of the patients' bedrooms which they would only darken.

Dr. Walther and his followers are opposed to Liegehallen altogether and think it inadvisable for a number of male or female patients to pass their rest hours together and prefer that they should repose in the solitude of their chambers. There are no doubt invalids who rest more completely when alone and in that case the resting hours should be passed on a private balcony with the air circulating round them as is so well contrived at the Wehrawald and Schatz Alp sanatoriums and not while lying on their beds, as is often done. However, for the mass of consumptives Liegehallen are, if not too crowded, excellent, as patients have their own reclining chair and table, on which is a model sputum bottle, and can have abundant wraps to keep them warm. A space of at least four feet wide should be allowed to each patient, so as to preclude all chance of infection through droplets as pointed out by Flügge. Here the inmates can pass a great part of the day in all weathers and can be easily supervised by the medical man. Warmth is maintained without difficulty in the prone position by the aid of blankets or woollen coverings and in the German people's sanatoriums the feet are incased in felt boots or plunged into a Fuss-sack as is the habit in Danish institutions. Liegehallen are generally from 10 to 15 feet in height and from 10 to 13 feet in depth, the length depending on the number of patients to be treated. If too lofty there is a difficulty in protecting from bad weather and sun and if too deep, the sun does not always penetrate to the innermost recesses. The rain or snow or sun glare is kept out by blinds drawn down from above or by curtains. These shelters facing the south often become too

hot in summer and consequently a special set placed in the shade and facing north is provided in the grounds, or the shed is sometimes arranged to contain a double row of couches separated by a partition, those for winter facing south and those for summer facing north. All Liegehallen should have swing windows above the patients' heads to secure a cool current in warm weather. It is also advisable to have some rotatory shelters which can be arranged for protection from the prevalent winds, and these can be placed in different parts of the grounds. Such small shelters are very convenient for consumptives when treated in their own homes.

Every sanatorium must secure for the patients a bountiful supply of air, by night as well as by day, and in addition to the Liegehallen a certain number of rooms should be fitted with balconies protected with blinds from rain and glare on to which the beds of feverish patients can, when required, be wheeled through the window. All windows must be made to open, and the best plan is to have the upper portion falling in, louvre fashion, and the lower to open fully inwards as a French casement. The upper part will always be kept open by night and by day, and also, as a rule, the lower part, but when necessary to exclude storms or too strong light, jalousie blinds can be used. Over the door of each ward should be a swing window so as to admit of a through current of air even when the door is shut. Some sanatoriums have with great advantage double doors to exclude noise from the passages. All wards should be fully ten feet high, 11 feet is better, and some foreign sanatoriums allow 13 feet. There should be a space of not less than 1000 cubic feet per head. It is often urged that this cannot be essential with all the windows open, but it must be borne in mind that it is highly important to avoid wind and draught and the larger the air space the less likelihood there is of draughts. What is required for a consumptive is that the air should be continually renewed without his knowledge. If the open-air system is properly carried out there is no need for artificial ventilation, and though in many well-known sanatoriums some system exists it is unnecessary and being generally unused becomes a receptacle for dust.

A word about heating as I have touched on ventilation and here we have to confess that the coal fire and hearth, the stronghold of British domestic life, do not assimilate well with the open-air system but promote draughts. Fires often smoke under the ordeal of open windows and are not found to furnish sufficient or even heating, while they necessitate more labour. Central heating with radiators placed in the wards and corridors answers admirably and reduces service. It need not be added that electric lighting is the best for adoption.

GRADUATED EXERCISE.

This is a most important feature of the system and one that Brehmer dwelt on strongly, this being proved by the fine series of graded walks constructed at Görbersdorf which extend over miles of the park. Walther has planned his grounds with this view and all complete sanatoriums set aside a large portion of their property or utilise the neighbouring woods and paths for this purpose. The best plan is to give the patient the uphill at the commencement of his walk and the downhill at the end, and walks should be provided in sheltered places at gradients of 1 in 20, 1 in 10, and even 1 in 8. The most extensive and best arranged set of walks I have visited are at the Vejlefjord Sanatorium in Denmark, made under the supervision of Dr. Saugman, an old patient and afterwards medical assistant at Görbersdorf, the beautiful grounds of the sanatorium, extending over wooded hills and sloping to the sea, being particularly suited to the purpose. Dr. Saugman has classified the walks in seven series, according to the strength of the patient, and has felicitously named them after the leading medical authorities on tuberculosis and on sanatoriums, so that we come across "Laennec's Vej," "Villemin's Vej," "Brehmer's Vej," "Dettweiler's Vej," and the like. The pace generally enjoined is about two miles an hour, and as Dr. P. Horton-Smith[1] well shows, this very slow walking requires sustained muscular exertion and is not the easy toddle that might be supposed. In the German and foreign sanatoriums generally walking is the only exercise recommended, chiefly because other forms are not understood, but for English men and women who love games there is no reason why some moderate game, such as golf or croquet, should not be introduced for some patients, which certainly renders exercise a little more interesting. At two of the English sanatoriums rabbit shooting is provided two or three days a week. There is no doubt of the advantage of graduated exercise. Muscular strength is gained, appetite increases, the processes of digestion and assimilation are stimulated, sleep is promoted, the standard of nutrition is raised, the respiratory power is augmented, the depth of inspiration is increased, and some enlargement of the thorax takes place, and though this does not equal what is achieved at high altitudes something is done in this direction.

An abundant dietary, representing all groups of food, is requisite to sustain the patient against the bacillar attack, but we hear too much of gain of weight and too little of gain of muscular power. When a patient is stated to have gained a stone or two or three stones during six months' residence in a sanatorium this is generally in the form of fat and such increase speedily vanishes when the stuffing process ceases. In patients with extensive excavation and probable aneurysmal dilatations of branches of the pulmonary artery from exposure in the cavity, the gorging of the vascular system from a very rich and plentiful dietary often leads to rupture of the vessels and fatal hæmoptysis, so that it is desirable not to stuff the individual with as much as he can assimilate but with as much as his vascular system can safely bear. Gain of weight is easily accomplished and is often as much due to want of exercise, as is seen during sea voyages, as to large feeding. It can be attained even in pyrexial cases if the patient be confined to bed while the stuffing goes on, as I showed many years ago at the Brompton Hospital.[2] It is too much the fashion to cite increase of weight as a proof of great improvement and even of arrest of tuberculous disease, but unfortunately we find patients gaining weight while tuberculous disease is extending, and many a sanatorium medical officer has lamented to me over the fact that improvement in general condition is not always accompanied by improvement in the physical signs. Unless by means of regulated exercise we improve muscular vigour a large gain of weight is not much advantage.

MEASURES OF DISINFECTION.

The sputum must either be disinfected by high-pressure steam or strong carbolic acid—5 per cent.—or, what is very convenient, mixed with sawdust and burnt in a furnace or automatic destructor. At many sanatoriums peat is used for the purpose and in olden days at the Brompton Hospital immediately after the discovery of the tubercle bacillus the sputum was stirred in with the small coal used in the furnaces and thus consumed. At present it is burnt in an automatic destructor and the sputum cups are sterilised by steam. Dettweiler's pocket flask seems the best for the use of patients who are out on walks and in the Liegehallen, but where it is necessary to supply spittoons in passages and halls it is advisable to place them not on the floor but at a height of four or five feet above it so as to facilitate a safe lodgment of the sputum.

Patients' clothes should be disinfected with steam before being washed. All mattresses, blankets, pillows, and cushions should pass through the disinfecting chamber and the patients' rooms after they leave should be disinfected by formalin vapour. In the construction of the sanatorium and its fittings and furniture care must be taken to avoid any ledges or crannies on which dust can collect. The experiments of Flügge and others have proved that not only is dried sputum a possible source of infection but that the droplets ejected by a consumptive in the act of coughing or conversing may also prove a danger, and Fraenkel and others have shown that guinea pigs can be infected by the spray ejected by consumptives in coughing, but is it not wonderful that physicians to out-patient departments of chest hospitals and their assistants in close conversation for hours together with consumptives in all stages are not more often affected!

We are too apt to lay much stress on the few experiments made on the lower animals and to ignore the great and obvious living experiments which we witness any day in our consumptive hospitals and sanatoriums. When we are informed that the cough spray drop containing tubercle bacilli contains them in a high degree of virulence and we know that a large number of medical men, nurses, and students inhale these droplets every day and escape infection altogether, we must conclude that there is something in the

[1] Practitioner, September, 1903.

[2] Brit. Med. Jour., Sept. 7th, 1872.

human organism which specially protects it from the bacillar attack and renders it more or less invulnerable.

HYDRO-THERAPEUTICS.

For the greater number of consumptive patients, and especially in the cases of limited tuberculous consolidation, some form of bath is desirable. The "daily tub" of cold or tepid water when patients are without fever has a bracing effect on the nervous and muscular systems and promotes appetite, while the douche or shower bath, if the patients be strong enough, causes them to take deep inspirations and consequently produces more complete aeration of the lungs. All well-organised sanatoriums are provided with a good hydro-therapeutic department.

SUN BATH.

This treatment, which I believe originated in South Austria, is practised in certain sanatoriums and is well worth a study. The patients, with the smallest modicum of clothing, lie at full length in the open on mats exposed to the sun's rays in the hottest part of the day for periods varying from a quarter of an hour to one and a half hours and are then rubbed down or have a douche or shower bath administered before the friction. Dr. Saugman of Vejlefjord reports that the sun bath is popular with consumptives who are in no great hurry to resume their clothes. After the sun bath the rectal temperature rises two, six, and even eight points Centigrade, reaching 38·1° (100·3° F.) or 38·3° C. (100·9° F.) and then falling very quickly. After many baths the daily rise is only one point Centigrade and in some patients even a fall of temperature was noted. Appetite was generally increased, but no great influence was observed on weight. Patients with stationary weights appeared to fall off, while those with rising weights continued to gain. Dr. Saugman gives an account of 26 consumptives who were given these baths—13 men and 13 women—five in the first stage (Turban), six in the second stage, and 15 in the third stage. 20 patients improved from the treatment, but two ladies gave up after the first bath, one on account of the languor induced thereby. Two patients suffered from erythema and in one it was accompanied by considerable fever. This lady, however, eventually became accustomed to the baths and was able to endure them from 20 to 40 minutes without discomfort. In one case the bath was followed by a rise of temperature and dry pleurisy. Cases of strumous joints seem to do well under this treatment.

Dr. Denton Johns showed me some patients whom he had submitted to sun-bath treatment even in the months of February and March. They were well developed and splendidly tanned and looked pretty vigorous generally. The great difficulty in this country is to provide a sequestered spot for the sun bath and Dr. Johns has utilised for male patients an old high-walled circular fruit garden for the purpose, which is arranged with mats on a sunny slope with a good douche at hand. He has placed the ladies in a pit-like depression of the grounds, well sheltered from the vulgar gaze, and during the hour of the bath a flag is hoisted to warn off all intruders.

SANATORIAL RESULTS.

Let us now inquire what results have been obtained from the sanatorium treatment of consumption which has been in vogue for some years in Germany and Switzerland and of which tolerably trustworthy statistics have lately been published. The German Imperial Board of Health [3] has been collecting statistics of the sanatoriums since the year 1896 based on 6000 cases kept under observation until 1901 with the following result. Of every 100 sanatorium patients at the close of the treatment (presumably three to six months) 67·3 per cent. were capable of resuming work in their former calling; 7·1 per cent. undertook occupation of a less arduous nature; 14·6 per cent. were partly capable of work; and 11 per cent. were incapable of work. This, of course, is regarding results from the invalidity insurance point of view, but stated generally the results are: 87·7 per cent. were dismissed as cured or improved; 6·8 per cent. were not improved; 3·1 per cent. were worse; and 0·5 per cent. died. Of the patients who came in the first stage the percentage of "improved" reached 96·2 and of those in the second stage, 89·9. We must bear in mind that these figures are supplied by the sanatoriums themselves to the Imperial insurance department which is not answerable for their accuracy and therefore the first classification according to the ability to work is valuable as a means of checking these last figures. The insurance statistics further show that for the years 1897, 1898, 1899, 1900, and 1901 "at the conclusion of the sanatorium treatment, there was a successful result excluding in all probability the appearance of invalidity in the near future" among those insured. The subjoined table (Table I.) shows the percentages of those discharged fit for work and their gradual reduction after leaving the sanatoriums.

TABLE I.—*Showing the After-results of German Sanatoriums in 6000 Consumptives.*

	Discharged from sanatoriums capable of work.				
	1897.	1898.	1899.	1900.	1901.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
—	68	74	74	72	77
At close of 1898	44	—	—	—	—
At close of 1899	30	—	—	—	—
At close of 1900	30	—	—	—	—
At close of 1901	27	—	—	—	—

The question naturally arises how far these results were permanent and this is answered by the statement that the success of the treatment obtained in 1897 (68 per cent.) had lasted till the close of 1898, 1899, 1900, and 1901 in 44, 30, 30, and 27 per cent. respectively of the persons under permanent supervision. This does not say much for the durability of the arrest of the disease as in four years 41 per cent. had relapsed. But according to the German authorities the State and the family ought to be grateful if the ability to work is preserved to a man even for some years who otherwise would have fallen a victim earlier to disease or death and thus the expense of maintaining sanatoriums is justified. They remark, as worthy of note, that a few of the patients who were admitted into the sanatoriums with advanced tuberculosis and were afterwards discharged as "not improved" were found to be on subsequent examination completely capable of work.

Dr. Schmid,[4] the director of the Swiss Health Office, has published a noteworthy report on the results of six public sanatoriums with an aggregate of 366 beds for the years 1899 to 1901. The report has been made under considerable difficulties, as each institution framed its results in a different way, but the particulars and conclusions are most valuable and well worth study. The total number of patients used for these statistics is 2954, among whom the male sex slightly preponderated and included a large proportion of severe cases. 547 patients were admitted with pyrexia of various degrees and some of these never lost it; 1189 were admitted without fever. Of these patients 38·5 per cent. were in the first stage of Turban's[5] category, 34·5 per cent. were in his second stage, and 27 per cent. were severe cases in his third, so there were a considerable number of advanced cases. The sanatoriums included Heiligen-Schwendi, altitude 3224 feet; Wald, 2925 feet; Braunwald, 4920 feet; Leysin, 4800 feet; Malvilliers, 3900 feet; and Basel-Davos, 5200 feet; all therefore were at fair altitudes. These patients appear to have belonged chiefly to the middle and lower classes. The length of stay in the sanatoriums varied from 70 to 204 days but averaged four months each.

The results of the treatment may be stated as follows. Of the total number at the time of leaving the sanatoriums 82·5 per cent. had improved; 16·2 per cent. had not improved; and 0·8 per cent. had died. Classifying by the capacity for work, in from 48 to 50·9 per cent., or about half, arrest of the disease took place, and about one third were fit for work for a longer or shorter time. Only one-sixth did not recover their power of labour. The effect of extent of disease and stage is well shown in Table II.

[3] Tuberculosis, June, 1903.

[4] Tuberculosis, July, 1903.

[5] Turban includes under the first stage slight cases, where the disease affects, at the least, one lobe or two half lobes. In the second stage are more extensively affected patients with either two lobes involved, or one severely so, and softening or excavation present. His third stage includes all other degrees of disease not embraced in the first and second stages.

TABLE II.—*Showing the Influence of Stage.*

On discharge.	Stage. First.	Second.	Third.
	Per cent.	Per cent.	Per cent.
Work power unimpaired	83·9	40·6	10·1
,, ,, but little impaired	14·1	47·6	34·5
,, ,, much impaired ...	2·0	11·8	55·4

The most interesting part of the whole paper is the account of the after-results in these patients which has been drawn up by an entirely impartial committee consisting of three Basle professors—Dr. Egger, Dr. Hägler, and Dr. von der Mühls—but unfortunately it only deals with the results of one institution—viz., the Basel-Davos Sanatorium. We here learn what has become of the patients during the years since they left Davos, and this record is very satisfactory, a marked contrast to the German sanatorium results (*vide* Table III.).

TABLE III.—*Showing the After-results of Basel Davos Sanatorium.*

—	Discharged. 1897. Well and capable of work.	Partly or not capable.	Died.	1898. Well and capable of work.	Partly or not capable.	Died.	1899. Well and capable of work.	Partly or not capable.	Died.	1900. Well and capable of work.	Partly or not capable.	Died.
	%	%	%	%	%	%	%	%	%	%	%	%
At close of 1899	70·1	5·1	24·8	67·4	13·8	18·8	—	—	—	—	—	—
At close of 1900	64·3	5·1	30·6	62·6	8·1	29·3	63·1	17·4	19·5	—	—	—
At close of 1901	58·2	5·1	36·7	59·1	9·4	31·5	59·7	12·4	27·9	73·1	9·2	17·7

Table IV. shows the influence of degree and stage at the patient's admission to the sanatorium on the after-results and points out clearly the importance (1) of early admission to treatment and (2) the unsuitability of the advanced cases for sanatoriums; hence the absolute necessity of consumption hospitals where these cases may receive appropriate medicinal treatment and nursing.

TABLE IV.—*Showing the Influence of Degree of Disease when admitted on After-results.*

At the close of 1901.	Discharged. 1897. Well and capable of work.	Partly or not capable.	Died.	1898. Well and capable of work.	Partly or not capable.	Died.	1899. Well and capable of work.	Partly or not capable.	Died.	1900. Well and capable of work.	Partly or not capable.	Died.
	%	%	%	%	%	%	%	%	%	%	%	%
(Turban) Stage 1	84·3	2·0	13·7	81·6	5·3	13·1	81·9	10·9	7·2	97·1	2·9	0·0
Stage 2	48·4	7·2	46·4	32·2	21·4	46·4	47·8	17·4	34·8	58·2	11·6	30·2
Stage 3	5·3	10·5	84·2	17·4	8·7	73·9	8·0	8·0	84·0	21·1	26·3	52·6

The superiority of the Swiss over the German results confirms an opinion that I have long held and published that the climate of high altitudes exercises a most valuable healing influence—equalled by no other conditions—over tuberculosis of the lung and disproves the absurd opinions lately promulgated that climate has no influence in the treatment of consumption. The results of the English sanatoriums have not as yet been sufficiently large and complete to permit of comparison with the German and Swiss statistics. Dr. F. W. Burton Fanning's report on the results of sanatorium treatment in the United Kingdom published in the Transactions of the British Congress on Tuberculosis (1901) was too scanty to enable clear deductions to be drawn, but his recent paper on three years' results of Mundesley Sanatorium[6] contains some interesting conclusions though the number of cases (146) is too small to justify definite deductions. 84·60 per cent. of his patients improved and only 15·38 received no benefit. Since they quitted the sanatorium 43 have died (two not from tuberculosis); the greater part of the remainder seem to be in good condition and even able to work. I have other sanatorium statistics from England and the United States but on a smaller scale than the Swiss and German and therefore less trustworthy for conclusions; but although we may hope for better results as the sanatoriums develop and improve, and especially when the unsuitable cases can be housed separately, we find so far that although sanatoriums are a great boon to consumptives they cannot be depended on to arrest tuberculous disease beyond all chance of relapse. They may, however, be expected to produce great improvement in all except advanced cases. In all but these we may look for reduction of temperature and pulse-rate, lessening of cough and improvement of respiration, disappearance of night sweats, gain of weight, and increase of muscular power. Many patients leave sanatoriums with no cough, no bacilli in the sputum, with diminished physical signs, and with the appearance of healthy men and women.

The educational value of sanatoriums must never be overlooked; the patient, having been trained to deal with his sputum and other secretions, is no longer a source of danger to his neighbours and he returns to his family and friends as the apostle of fresh air and wholesome living and the opponent of all those sins against hygiene and common sense which produce physiological misery and degrade the human constitution, while they surely tend to decay and death. Such an apostle, though sometimes trying in a household where the parents are aged or suffer from bronchitis and rheumatism, does incalculable good, and especially in the dwellings of the poor, and enforces his gospel by example as well as by precept.

I have spoken of sanatoriums, but it should be remembered that the open-air system is now practised in all the consumption hospitals of London and that the report of the Brompton Hospital, which is by far the largest institution, shows a considerable rise in the number of the improved class, even in advanced cases, since its introduction. We must not be satisfied with the sanatorium treatment of consumption alone but endeavour to discover other weapons to employ in our warfare against the terrible foe. Anti-tuberculous serum has had only a limited trial and in some cases in which I employed it it certainly offered a prospect of future success if persevered in. Medicine accomplished much before the open-air system was introduced and should be combined with it and climate has proved over and over again of the greatest efficacy.

[6] THE LANCET, August 15th, 1903, p. 453.

SOCIETY FOR THE STATE REGISTRATION OF TRAINED NURSES.—At a special general meeting of this society, held in London on Jan. 23rd, at which Miss Isla Stewart, matron of St. Bartholomew's Hospital, presided, amendments to the Draft Bill of the society were considered. The Bill will be introduced into the House of Commons during the coming session by Dr. R. Farquharson, M.P. for West Aberdeenshire. The following Members of Parliament have also promised to back the Bill:—Sir Thomas Wrightson, Bart., Member for East St. Pancras; Sir John Batty Tuke, M.D. Edin., Member for Edinburgh and St. Andrews Universities; Mr. Hugh Crawford Smith, Member for Tyneside division of Northumberland; Mr. R. C. Munro-Ferguson, Member for Leith Burghs; Mr. H. J. Tennant, Member for Berwickshire; Mr. Alexander W. Black, Member for Banffshire; The Right Hon. R. B. Haldane, Member for Haddingtonshire; Sir James Joicey, Bart., Member for Chester le Street, Durham; Mr. C. E. Hungerford Athole Colston, Member for Thornbury division of Gloucestershire; Mr. Harry Trelawney Eve, Member for Mid-Devon; and Dr. Edward Charles Thompson, F.R.C.S. Irel., Member for North Monaghan.

An Introductory Address

ON

THE RELATION OF THE MEDICAL PRACTITIONER TO PREVENTIVE MEASURES AGAINST TUBERCULOSIS.

Delivered at the Post-graduate Course of the Mount Vernon Hospital for Consumption and Diseases of the Chest on Jan. 7th, 1904.

BY ARTHUR NEWSHOLME, M.D., F.R.C.P. LOND.,

MEDICAL OFFICER OF HEALTH OF BRIGHTON.

GENTLEMEN,—When asked to give an address in connexion with this post-graduate course a consideration of the preventive measures, and particularly the public preventive measures, against tuberculosis from the family practitioner's standpoint appeared likely to yield matter of interest and importance. For five years I have been practically engaged as medical officer of health in work on this subject from the standpoint of public health in connexion with a system of voluntary notification of cases of pulmonary tuberculosis which has been in operation in Brighton since January, 1899. To-day I ask you to consider some aspects of the same subject in the light of the relationship between the medical practitioner and the patient on the one hand and between these two and the medical officer of health on the other. Our main conclusion will be, I believe, that the professional duty of the practitioner and the private welfare of the patient are not only completely compatible with but are, in fact, best advanced by, a complete adoption of the measures which the interests of public health demand.

It may be taken as accepted that pulmonary tuberculosis (or phthisis, as it will be named throughout) is an infectious disease which is capable of being communicated from sick to healthy. The conception of necessary preventive measures will vary according to the view taken as to the degree of infectivity and it is necessary therefore to give a preliminary consideration to this point. True, infection is followed by active disease in only a relatively small proportion of those acquiring it. But as in some 50 to 60 per cent. of the necropsies made in hospitals signs of old tuberculous lesions, cured by calcification or fibrosis, have been found, it follows that in a very large proportion of the total population a struggle has occurred between host and unwelcome guest, the former having in these instances come off victor. And although so many in the end escape an obvious attack of clinical tuberculosis, the number who are susceptible and fall victims to the infection is very large in proportion to the total population. Thus all forms of tuberculosis caused a death-rate in England of 1·8 per 1000 in 1902. If we assume that there are three persons constantly ill with tuberculosis for every death, then one in 185 of the total population suffers from tuberculosis, or on the assumption of uniform distribution approximately 1 in every 35 families. If we instance the life period from 35 to 45 years and confine ourselves to phthisis we find that in 1896-1900 the death-rate from phthisis was about 1 in 330 of the male and 1 in 500 of the female population at these ages. In calculating the duration of sickness involved in the deaths at these ages I prefer to take five years instead of three as the average duration of sickness in fatal cases as being in my experience nearer the truth. It is well known that the attack of phthisis ending in death has often been preceded by earlier attacks from which the patient has temporarily recovered. On this five years basis 1 in 66 of the men and 1 in 100 of the women aged from 35 to 45 years are at any one time ill with attacks of phthisis which eventually prove fatal. This estimate does not include the enormously larger number of cases which end in recovery or quiescence. Between the 1 in 66 or 1 in 100 of the adult population who suffer from phthisis ending in death and the 50 per cent. of total necropsies from all causes of death in which healed tuberculosis is found there are numerous minor degrees of sickness which have been overlooked but which have had their effect in diminishing the efficiency and enjoyment of life, and it may be added in disseminating infection. Our own experience must tell us that it would be difficult to make accurate inquiries into the history of three or four families without coming upon evidence of tuberculous disease. Such a large proportion of the total population suffers from active tuberculosis, happily in most instances not fatal, as to render it unwise and unsafe to act on the supposition that very exceptional susceptibility is required before active tuberculosis is developed.

At the same time there need be no hesitation in agreeing that what Dr. T. Clifford Allbutt[1] happily describes as an "openness to consumption" is an important influence in favouring the growth of the seeds of this disease. The same remark would apply, probably almost equally, to many of the acute infectious diseases. For some years past I have kept a record of all the susceptible persons—i.e., those not having previously suffered from an attack of the same disease, in houses in which cases of diphtheria and scarlet fever have occurred. Owing to failures to secure early medical treatment and in recognition of these cases their notification is frequently delayed and the majority of presumably susceptible persons have been exposed to infection for two or three days before isolation was begun. And yet only 22 per cent. of the persons not previously having had scarlet fever who were temporarily exposed to infection developed the disease. The escape from attack of the majority of those drinking water or milk containing the germs of enteric fever can similarly not be sufficiently explained on the supposition which would explain the escape of a soldier in battle from being shot when bullets were flying about. Some persons are less susceptible than others to each of the infectious diseases and such persons only become infected when the virulence of the contagium is exceptionally great or the dose of contagium is exceptionally large or frequently repeated, or personal susceptibility is temporarily increased by dissipation or over fatigue or mental distress or by an intercurrent illness like influenza. Obviously there must be exposure to infection before it can operate and it will furthermore be agreed that dosage and particularly cumulative dosage of infection is a pre-eminently important factor in producing tuberculosis. If it be admitted that day for day tuberculosis is less easily communicable than most acute infective diseases the difference in the duration of infectivity is to be set against this. The healthy occupants of a phthisical home, especially among the poor, may be compared to a city which is subjected to a protracted siege, in which the combined effect of arms, deficient nutrition, and depressing emotions are at work. The inhabitants of such a city may escape with but little damage if the siege is raised at a comparatively early period; but they succumb in large numbers if it is prolonged. Similarly, the healthy members of a phthisically invaded household may be able to withstand infection if the disease is diagnosed early and if precautionary measures are at once begun and are continued thereafter; but they eventually fall victims to the repeated doses of infection if ignorance or fatalistic inertia prevails.

It is, however, urged by many that indirect measures not specially directed against tuberculosis have been in the past the main causes of the great decline in the death-rate from this disease which has occurred, and they will suffice for the future. Stress is properly laid on proper dwellings with efficient through ventilation and access of sunlight, and even more on a high condition of personal nutrition. These are important factors both in the prevention and the cure of phthisis. It is necessary, nevertheless, to preserve a sense of perspective in our preventive measures. Doubtless phthisis is most common among the poor whose conditions are a contrast to those just enumerated. But phthisis is caused by phthisis and does not occur, so far as we know, apart from the existence of a previous patient suffering from this disease. The tubercle bacillus is not ubiquitous. It haunts the vicinity of the consumptive. An extensive experience among notified cases compels me to the conclusion that defective nutrition, insufficient sunlight and ventilation, and domestic uncleanliness are mere adjuvants to the spread of infection and that this spread may occur in their absence. Unless cleanliness involves also the prompt destruction of infective material infection may spread almost regardless of environment. In the following instance such spread occurred to servant maids belonging to a family

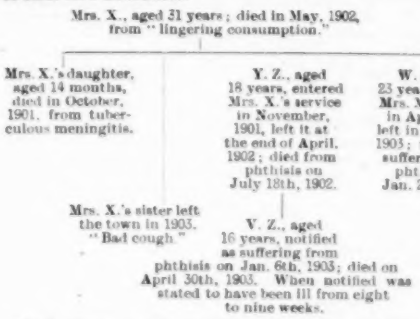
[1] Brit. Med. Jour., Oct. 28th, 1899, p. 1149.

which had never previously suffered from tuberculosis, although the sanitary conditions of their mistress's house were, apart from the lack of precautions in connexion with the mistress's illness, perfect.

Mrs. X. lived in a large house open to the sea, and in an excellent sanitary condition. After several years' illness she died from phthisis in May, 1902. The disease was acquired before coming to the town. As shown in the following scheme her only child died seven months earlier from tuberculous meningitis and her sister who nursed her for some months before she died had a "very bad cough" when she left the town some months after Mrs. X.'s death.

Y. Z., aged 18 years, entered Mrs. X.'s service as general servant in November, 1901. One of her daily duties was to wash Mrs. X.'s handkerchiefs and to clean out her spittoon. No precautionary instructions were ever given to her. She left her place in the following April when she was admitted to hospital suffering from "bronchitis and pleurisy." Before entering Mrs. X.'s service she had been in good health. She subsequently returned to her mother's home and died there from acute phthisis on July 18th, 1902. Her brother, V. Z., living at the same address, who, up to the onset of his illness had a healthy outdoor occupation (driving a cart for a news-agent) was notified on Jan. 6th, 1903, to be suffering from phthisis. He was then stated to have been ill for only nine weeks, though he looked ill for a few weeks previously. The early diagnosis was made in consequence of the detection of tubercle bacilli in his sputum. He died from acute phthisis on April 30th, 1903. Meanwhile, a sister, W. Z., entered Mrs. X.'s service just before her sister Y. Z. left it, and took on the latter's duties, except that she declined to wash the handkerchiefs of the patient. (These were sent to wash without any preliminary treatment. What about the poor "sorter" at the laundry?) Mrs. X.'s sister now washed out the spittoons. W. Z. swept out the sick room. She remained in Mrs. X.'s service until January, 1903, and as she frequently visited her sister Y. Z. during this time she had double opportunities of infection, assuming carelessness on the part of either patient. On Jan. 29th, 1903, W. Z. was notified to be suffering from phthisis. She was admitted to the borough sanatorium on Feb. 19th and discharged on March 21st greatly improved. On June 4th she was readmitted owing to a return of cough and expectoration. She left on July 2nd and since then has kept well and is in domestic service. (She was seen in January, 1904, and had continued to make weight.)

The Z. family consisted of the two phthisical sisters and the phthisical brother mentioned above, their father and mother, and another sister, aged 20 years. There is no history of phthisis in the family. It cannot, I think, be doubted that this family owed the decimating invasion of tuberculosis to the lax medical and nursing arrangements of Mrs. X.'s household.


Mrs. X., aged 31 years; died in May, 1902, from "lingering consumption."
Mrs. X.'s daughter, aged 14 months, died in October, 1901, from tuberculous meningitis.
Y. Z., aged 18 years, entered Mrs. X.'s service in November, 1901, left it at the end of April, 1902; died from phthisis on July 18th, 1902.
W. Z., aged 23 years, entered Mrs. X.'s service in April, 1902; left in January, 1903; notified as suffering from phthisis on Jan. 29th, 1903.
Mrs. X.'s sister left the town in 1903. "Bad cough."
V. Z., aged 16 years, notified as suffering from phthisis on Jan. 6th, 1903; died on April 30th, 1903. When notified was stated to have been ill from eight to nine weeks.

Such cases as the above—and the experience of most medical men will furnish somewhat similar instances—indicate that statements like the following must be received *cum grano salis*: "The testimony of experience ..... should, I think, be sufficient to satisfy us that the communicability of pulmonary tuberculosis can only be contrasted, not compared, with diseases such as small-pox, typhus fever, or whooping-cough. It cannot, indeed, be compared with the communicability of enteric fever which is, perhaps, the least communicable of the diseases which are at present classed together as the infectious diseases and concerning which preventive measures are taken."[2] The limited communicability of enteric fever is, I venture to maintain, strictly comparable with that of tuberculosis. Accurate statistics on a sufficiently large scale of the incidence of enteric fever and phthisis respectively among nurses or relatives engaged in nursing each of these diseases would go far towards settling this point. In order to solve the problem they would need to be more definite and complete than those supplied to Dr. Bulstrode on the basis of the experience of the Ventnor Hospital. On these no reliable conclusion can be based.[3] Phthisis is rarely acquired by nurses in public institutions; so with enteric fever. Phthisis is frequently acquired by nurses or relatives in private houses; so with enteric fever. That is all that can be said until more exact facts are available.

The relative rarity of infection of hospital nurses by tuberculosis is important from the medical practitioner's standpoint as a study of it supplies him with the main indications for safeguarding the health of the relatives and attendants of his own consumptive patients. He is already aware that the channels of infection, as in enteric fever, are limited. The following scheme sets forth the main precautionary measures that are required:—

I. The infection.
1. Dose.
2. Cumulative dosage.
3. Closeness of contact.
4. Lack or absence of precautions.
5. Defective ventilation and cleansing of rooms.

II. Receptivity.
1. Inherited.
2. Acquired.
1. Exhaustion from nursing, &c.
2. Depressing emotions.
3. Insufficient nutrition.
4. Defective ventilation and cleansing of rooms.

This scheme does not pretend to be logical or exhaustive but it serves to draw attention to some of the more important points.

In hospitals, long before the communicability of phthisis was recognised, expectoration was received into spittoons and large dosage of infection was thus prevented. Similarly hospital wards have usually been well ventilated and kept scrupulously clean, all surfaces both of walls and floors being washable. Again, hospital nurses are not so long on duty as wives or other relatives, the contact between them and the patient is less intimate as well as less prolonged than that of home nurses, they have periodical holidays, are well fed, and are not subjected to the same extent to the influence of depressing emotions or of insanitary house conditions. They are better trained in regard to the washing of hands and other personal precautions. In view of the above circumstances the difference between the infectivity of phthisis and of enteric fever in hospital and in private practice is easily understood. Which of these two diseases is the more communicable remains to be proved.

I can imagine no better means of converting those who underrate the infectivity of tuberculosis than the task of administering the notification of this disease in a large town, of interviewing some 200 patients each year, of examining over 100 patients who are yearly treated for a month each in our borough sanatorium with a view to train them so as to diminish the probability of their continuing sources of infection, of obtaining the family and personal histories of each of these, and tracing, as one gradually comes to do, links of infection which, although individually they may not be conclusive, when connected together become as convincing as any evidence can ever be regarding a communicable disease of chronic course.

We can all agree that the tubercle bacillus varies greatly in infectivity and virulence. We know it does so when grown in the laboratory. In varying in a similar fashion clinically it but follows the fashion of all the recognised infectious diseases. Obviously the safer policy in instituting precautions in family practice is to assume that we have to deal with the more infective type of tuberculosis. The preceding considerations enable us to conclude that phthisis is an infectious disease; that a certain personal vulnerability favours the disease, but that this vulnerability is widely distributed and may be acquired under unfavourable conditions of life; and that weight must be attached to the usually chronic course of phthisis involving repeated cumulative dosage of infection when certain simple precautions fail to be persistently and conscientiously carried out.

[2] Dr. H. T. Bulstrode's Milroy Lectures, THE LANCET, July 11th, 1903, p. 75.

[3] Ibid., p. 76.

What, then, is the family practitioner's duty in relation to a case of phthisis? His first duty obviously is to do his best for the patient. Incidentally his position by implication involves that he is, at least partially, the guardian of the health of the patient's family. Happily, the interests of both patient and relatives are identical and the measures most conducive to the patient's recovery will also give the maximum protection to the other occupants of the same house. In what follows I pray to be excused if I state some things which appear to be perfectly obvious. I ask you to believe that in my experience as medical officer of health these considerations have often been ignored or disregarded, or in a still larger number of instances have not been followed by systematic and persistent action. The bearings of the following scheme of action on the prevention of tuberculosis may now be discussed: (1) Diagnose the disease, and when recognised to be tuberculosis (2) acquaint the patient and his relatives with the nature of the disease; (3) investigate and if possible, ascertain the most likely source of the patient's infection; (4) treat the patient (under this head will come not only dietetic and medicinal treatment, but the question of sanatorium treatment and the control of the general hygiene of the patient); (5) train the patient to control his cough, as far as practicable to cough and to expectorate only when means are available for preventing the dissemination of infective matter, to live in the open air, to eat heartily, and to attend to every detail of personal hygiene; and (6) protect the attendants on the patient from infection, from over-fatigue, from impaired nutrition, carefully training them on the same lines as the patient himself, whose recovery depends largely on the state of their health.

Early diagnosis is the almost indispensable condition of recovery. Could some scheme be devised for insuring recourse to medical advice at the first onset of symptoms and could every practitioner utilise every means of prompt diagnosis which the skilful practitioner employs, a great step would have been taken towards the rapid reduction of tuberculosis. At present, in the experience of most sanatoriums as well as in private practice, this condition is not in the majority of cases fulfilled. Often, especially in the working classes, this is because the patient does not seek advice until disabled from work or attacked by some acute symptom like haemoptysis. Less often medical men attend patients for chronic coughs for months without a careful examination of the chest or of the sputum, one or both. How many phthisical patients are attended month after month for anæmia or dyspepsia in whom there is active tuberculosis?

The diagnosis of phthisis ought, according to distinguished physicians, to be made before tubercle bacilli can be found in the sputum. This is seldom done; and the best advice appears to be that any patient with expectoration should have it examined microscopically at frequent intervals. As a large number of practitioners have not the convenience, even if they had the time, for this, no local authority can in my opinion be regarded as fully performing its duties in the prevention of disease which does not provide for the gratuitous examination of all sputa sent by medical practitioners. In Brighton I have done this since 1897 and the following table shows the increasing appreciation by practitioners of this aid to diagnosis:—

Table showing the Number of Specimens of Sputum examined.

Year.	Town.	Sanatorium.
1897-98 (14 months)	21	—
1899	47	—
1900	86	
1901	125	
1902	146	23
1903	227	111

It is not for me to enter into other means of early diagnosis or to do more than to allude to the importance of suspecting tuberculosis in patients having frequent attacks of "influenza" or "bad colds."

Having diagnosed the disease the next duty of the medical attendant is to inform both the patient and his relatives of its nature. This rule is indispensable if their coöperation, which is essential for success in treatment, is to be secured. I doubt if any exceptions can reasonably be urged to the rule, though it is still too frequently neglected. It is essential, not only for the cure of the patient, but also in order that he may understand the reasonableness of the precautions which he will be called on to take.

The investigation of possible sources of infection may appear to be somewhat remote from the duties of the family practitioner, and yet success in the treatment of the patient may be wrapped up in the fulfilment of this indication. The three most common sources of infection are: (1) domestic; (2) occupational; and (3) alcoholic. I am not prepared to give these in any relative order of importance. It is clear, however, that if infection can be shown with some degree of probability to have been acquired in a dusty workshop or shop an indication for treatment is at once obtained. Even if the occupation cannot be altered the conditions of the workshop may be favourably changed, and if the medical officer of health and the practitioner come into touch at this point the conditions of the workshop can be improved and the patient's chances of recovery increased without the slightest risk to the patient's pecuniary welfare. This has repeatedly happened in Brighton and the bugbear of interference with a man's occupation need have no other existence than in the minds of those who have no experience of public health administration. If the patient is alcoholic to insist on a change in his habits in this respect, given that the patient's confidence can be secured and that he is open to conviction, is the best means not only of preparing him intelligently to carry out his instructions and of enabling him to recover the resistance to disease which has been lowered by alcoholic indulgence but also of stopping those visits to the public-house which, as Dr. J. Niven has indicated, are a frequent means of infection. So far as domestic infection is concerned in well-to-do families the medical adviser will have the opportunity of investigating possible unrecognised sources of infection in the same household. In poorer houses this is not so. The patient is treated as a club patient or at the dispensary or hospital. Domestic sources of infection cannot then be recognised by the medical attendant. Even if he sees the patient at home he has no time to investigate the case fully. It has been my frequent lot in visiting phthisical homes to find other unrecognised patients suffering from chronic tuberculous disease and innocently spreading more acute tuberculous disease to husband or wife or children.

The following instances illustrate this point.

CASE 1.—A man, aged 46 years, was notified to be suffering from phthisis on Sept. 22nd, 1903. He had been ill for five years. His child, aged one and a half years, had died on Dec. 30th, 1901, and the father was then advised by us to consult a medical man but his case was not notified until 20 months later. He died on Dec. 18th, 1903.

CASE 2.—The patient, a woman, aged 23 years, was notified on May 3rd, 1902. Her sister died from phthisis in December, 1899. This patient slept in the same room, the two beds being side by side. Another sister, aged 25 years, was sleeping up to date of notification with the present patient. The father, aged 57 years, had been "delicate all his life," attended Brompton Hospital many years ago, and he had pleurisy a few weeks before his daughter's notification was received.

CASES 3 and 4.—The patients, both males, aged seven and five years respectively, were notified on Sept. 30th, 1903. The father was then out of work; he is a brass turner. He has a very bad cough and nine years ago he returned from Canada, on the advice of a medical man owing to ill health. His case has never been diagnosed as phthisis. Another child of his, aged three years, has a "growth in throat" and is attending hospital.

CASE 5.—The patient, a woman, aged 18 years, was notified on Jan. 22nd, 1903. On inquiring into her history it was found that her mother had had a bad cough for many winters and was much emaciated. The daughter died on April 19th, 1903, and her mother died from phthisis on May 18th, 1903, ten weeks after her confinement.

CASE 6.—The patient, a woman, aged 30 years, was notified on Oct. 5th, 1903. She had then been ill for two years. Three years previously she left the workhouse where she was a night nurse in the consumptive ward. She frequently had bad colds and sore-throats while there. Her mother had been ill with phthisis since 1898 and she died from phthisis on Dec. 8th, 1903, never having been notified. It is doubtful whether this was domestic or institution infection.

It may be urged, however, that once phthisis is started its subsequent course is determined not by external but by internal infection, and that consequently the detection of the sources of infection or even of other cases of phthisis in the same house is not important from the private practitioner's standpoint. This point is one of real importance. In the card of precautionary instructions, of which a copy is appended (Appendix I.), and of which a copy is given to every known phthisical patient in Brighton, the following sentence occurs: "The patient himself is the greatest gainer by the above precautions, as his recovery is retarded and frequently prevented by renewed infection derived from his own expectoration."

Is the prevention of auto-infection by expectoration which has been already ejected from the mouth important? It is well known that tubercle travels from one part of the body to another by the lymphatics or blood-vessels. It is also agreed that healthy persons are infected chiefly by inhalation of infective dust or by direct infection by minute particles of ejected sputum. Dust is readily inhaled into the lungs. The patient cannot be re-infected directly by the spray of his own sputum but may if this becomes dry; and he may receive more massive re-infection if no precautions are taken to prevent the inhalation, as dust, of desiccated sputum. Is such re-infection an important factor in the downward progress of the consumptive when considered in comparison with the auto-infection caused by the cross-inhalation of infective mucus into other bronchioles than those first affected? I am unaware of any exact facts bearing on this point, but whether the danger be greater or less dust of any kind is harmful to consumptives, and the improvement of the consumptive is greatest in those cases in which there is the most rigid care to prevent re-infection by dust, whether because in this way re-infection by the tubercle bacillus or secondary infection by other micro-organisms is prevented. I hope you will agree, therefore, that the above paragraph is pathologically justifiable. I attach the utmost importance to its value in preventing danger to others than the patient. Self-interest is a potent motive for beneficence.

It is not my intention to give in detail the precautions which should be carried out in the treatment and training of the patient and in the protection of his attendants. These are well known. It is necessary, however, to draw special attention to one point. Assuming that a medical man is called in to a case of phthisis, and that up to that time no precautionary measures have been taken, is his duty fulfilled by insisting on the adoption of all the measures enjoined in such a set of "precautionary instructions" as that of which a copy is appended? I think not. It has been repeatedly shown that infection clings to the lower part of the wall and to the floor of the consumptive's room. It also hangs about his pockets, bed-hangings, &c. If the medical attendant is to do the best for his patient he must rid him of old infective material. And he cannot in the majority of instances do this alone. He must in the interest of his patient call in the aid of the medical officer of health, if he knows that the latter can arrange for efficient disinfection of the room and its belongings. Then, with a rigid system of cleanliness, re-infection of the room and repetition of danger from this quarter to patient and relatives can be greatly diminished. Such an intimation of desire for disinfection is almost tantamount to a voluntary notification of the case to the medical officer of health; and this voluntary notification can only in the case of private patients be made with the consent of the patient or his guardians. There are other reasons why such a voluntary notification is desirable.

1. The medical officer of health will probably be in a better position than the practitioner to detect the possible source of infection and thus to minimise any likelihood of continuance of infection when the patient resumes his occupation, &c.

2. The medical officer of health can not only enable the patient to "start fair," as indicated above, but he can do much to remove any insanitary conditions of home, workshop, or shop tending to retard recovery. It may be urged that sanitary authorities already have the power to abate overcrowding and to insist on the cleansing and ventilation of houses, workshops, &c. But sanitary officials are neither omniscient nor omnipresent and their work is most productive of good when directed especially to houses in which the presence of a case of phthisis renders overcrowding, uncleanliness, and other insanitary conditions supremely dangerous. Without an army of inspectors it is impossible completely to control overcrowding and dirtiness of houses, and the notification of phthisis gives valuable additional leverage in securing the abolition of minor insanitary conditions, the continuance of which is detrimental to the consumptive.

3. The most conscientious and indefatigable practitioner can usually only insure the carrying out of a portion of the measures which I have ventured to bring within the range of his legitimate duties. He may do so if his patient is wealthy and intelligent. He certainly cannot if his patient belongs to the working classes who contribute the vast majority of the cases of phthisis. Between these two extremes are patients in whose behalf a varying degree of intervention on the part of the local authority is required. There is no wish on the part of such authorities or their officers to interfere but only to help. If proper steps for preventing indiscriminate expectoration, for destroying any infective material already deposited by the patient, and for tracing possible connexions with other cases of phthisis have been taken, the less the intervention of anyone between the medical man and his patient the better. But in actual practice most phthisical patients have medical men in attendance only at intervals and for a short portion of their total illness. Visits of an educational character are certainly needed in the intervals of professional attendance, if not also while the latter is in operation. In actual experience in Brighton, although a considerable number of cases of phthisis have been notified in private as well as in dispensary and hospital practice, no appreciable friction has been caused by my visit or those of my assistants, and a large amount of carelessness as to the disposal of sputum has been thus stopped.

The fact remains that notwithstanding everything that both medical practitioner and medical officer of health may say to many consumptive patients, they will still continue to be more or less careless in the disposal of their sputum. This consideration has forced upon me the necessity of devising a scheme of sanatorium training which presents some novel features. The notified patients are usually in the second or third stages of disease. Absolute recovery is therefore out of the question. On the other hand, the majority of these patients have before them months or even years of life, during which, under present conditions, they remain a source of risk, increasing risk, to their relatives and fellow workmen. For such patients, since July, 1902, the town council of Brighton has set aside ten beds for consumptives in a detached pavilion of the fever hospital. In this pavilion over 100 patients have been treated during 1903, each patient remaining in the hospital for from four to five weeks. The patient is informed that he will not be "cured" during this time but that his health will almost certainly improve, that he will be well fed and have a good holiday, that he will be trained in the management of his illness, and that when he returns home he will be in an improved position for maintaining sufficient strength for work and will have learnt the means to this end while in the sanatorium. The patient and the public health are both benefited. 1. The patient himself improves in health and usually goes back to work with better hope and an ardent advocate of the method of life from which he has received great benefit. 2. While he is in the sanatorium his home is thoroughly disinfected and cleansed. The temporary freedom of the patient's relatives from infection is thus secured and the patient himself "starts fair" under the improved hygienic rules which while in the sanatorium he has been trained to practise. 3. The training of the patient while undergoing the open-air treatment is systematically enforced as regards rigid precautions, open doors and windows, methods of feeding, &c., and the benefit which he receives is the best guarantee that he will continue the necessary precautions after leaving the sanatorium. On leaving the sanatorium a letter embodying the particulars given in Appendix II. is sent to the medical attendant who recommended the patient for sanatorium treatment. We could fill three times as many beds were they available; but here, as in private practice, the difficulty is to persuade patients to undertake the month's sanatorium treatment at a sufficiently early stage of the disease to secure the greatest benefit, both curative and preventive. The remark is frequently heard, "I don't think I am bad enough yet to give up work," and by such delay much harm is done to others as well as to the patient. But the education of the public is steadily advancing; and even when patients are admitted to the sanatorium under the above conditions at a late stage of the disease a great public gain is secured and the subsequent course of the patient's illness is much less

likely to be punctuated by the occurrence of infection than would otherwise have been the case. I regard the sanatorium training of consumptive patients, as distinguished from any pretension to cure, as the most important preventive measure which has hitherto evolved from our system of voluntary notification of phthisis in Brighton.

I do not propose to discuss the subject of compulsory notification of phthisis. It is certain to come, but there are strong reasons against "forcing the pace." The surest progress is gradual and preventive measures must be organised and elaborated before we can in most districts obtain much good from universal notification of cases. The Local Government Board has recently supported an enactment providing for the compulsory notification of phthisis in Sheffield on the understanding that the powers are confined to the enforcement of notification and of cleansing and disinfection. No powers of compulsory isolation of phthisical patients are conferred and no responsible person has so far as I am aware ever suggested or is likely to suggest that the granting of such powers is desirable.

I have endeavoured in the preceding remarks to indicate the ideal position of the medical practitioner in relation to tuberculosis. If my contention be correct it is equally true that therapeutical measures are in the widest sense measures of prophylaxis, and that the aid of measures of public and private hygiene is as indispensable to cure as are therapeutical measures. But the practitioner in the majority of cases—i.e., those of the working classes—can scarcely be said to be the "family" practitioner. Even in the higher social strata his efforts at prophylaxis may be hampered by prudential and other considerations and he cannot undertake those wider inquiries which are required in order most completely to stop the sources of infection. Clearly, then, everything indicates the necessity of coöperation between medical practitioner and medical officer of health, and the more complete is this coöperation the greater is the benefit to the consumptive patient and to every member of the public.

APPENDIX I.

PRECAUTIONS FOR CONSUMPTIVE PERSONS.

Consumption is, to a limited extent, an infectious disease. It is spread chiefly by inhaling the expectoration (spit) of patients which has been allowed to become dry and float about the room as dust, or by directly inhaling the spray which may be produced when a patient coughs.

Do not spit except into receptacles, the contents of which are to be destroyed before they become dry. If this simple precaution is taken there is practically no danger of infection. The breath of consumptive persons is free from infection except when coughing.

The following detailed rules will be found useful both to the consumptive and to his friends:—

1. Expectoration indoors should be received into small paper bags and *burnt* immediately; or into a receptable which is emptied down the drain daily and then washed with boiling water.

2. Expectoration out of doors should be received into a suitable bottle, to be afterwards washed out with *boiling water*. If a paper handkerchief is used this must at once be placed in a waterproof bag, the contents subsequently burnt and the bag washed daily.

3. Ordinary handkerchiefs, if ever used for expectoration, should be *put into boiling water before they have time to become dry*, or into a solution of a disinfectant, as directed by the doctor.

4. *Wet* cleansing of rooms, particularly of bedrooms occupied by sick persons, should be substituted for "dusting" and sweeping.

5. *Sunlight* and *fresh air* are the greatest enemies of infection. Every patient should sleep with his bedroom window *open* top and bottom, a screen being arranged, if necessary, to prevent direct draught and the patient should occupy a separate bedroom.

N.B.—The patient *himself* is the *greatest gainer* by the above precautions, as his recovery is retarded and frequently prevented by renewed infection derived from his own expectoration.

6. Persons in good health have little reason to fear the infection of consumption. Over fatigue, *intemperance, bad air, dusty occupations and dirty rooms favour consumption.*

APPENDIX II.

DEAR SIR,—I beg to inform you that of was admitted to the phthisis ward of the sanatorium on and discharged on .

The following is a report of condition:—

	On admission.	When discharged.
Weight	—	—
Expectoration—		
(a) Amount	—	—
(b) Microscopically	—	—
Temperature	—	—
General condition	—	—
Remarks	—	—

The patient has been instructed to resume attendance under you.

Yours faithfully,

Medical Officer of Health.

NOTE ON THE PROBABLE MODE OF INFECTION BY THE SO-CALLED FILARIA PERSTANS, AND ON THE PROBABILITY THAT THIS ORGANISM REALLY BELONGS TO THE GENUS TYLENCHUS (BASTIAN).

BY H. CHARLTON BASTIAN, M.D. LOND., F.R.S.,
CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

IN the reports of the Sleeping Sickness Commission, No. 3, recently issued by the Royal Society, Dr. Cuthbert Christy calls attention to, and illustrates by maps, the distribution of Filaria perstans in East Equatorial Africa so far as it was known up to Oct. 23rd, 1902, and shows how that area corresponds almost exactly with the area of "distribution of the banana cultivation and clothed people." The attire of the natives in these regions, as described by him, is so scanty and of such a kind as to make it difficult to suppose that the fact of its existence could favour infection of the natives by the nematoids in question. But great importance undoubtedly attaches to the striking similarity between the area of cultivation of the banana and that of the prevalence of Filaria perstans in East Equatorial Africa. The fact of this coincidence in area is all the more significant, seeing that the information supplied by Dr. Christy does not, as he says, favour the notion that mosquitoes are agents concerned with the causation and distribution of this disease. Dr. Christy says: "Wherever the banana is growing in the districts I have examined there is found the F. perstans. What is more, it would seem that where the banana is most luxuriant (on Mount Elgon) there the inhabitants are most infected (60 to 70 per cent. and the blood crowded). The converse of this is also clearly correct, as will be seen by the map—viz., where the banana is scarce (in Southern Bukedi and Northern Kavirondo, in which latter place it is only grown within the mud walls of the small villages) there the percentage of F. perstans is small; and where there is no banana there is no F. perstans." The uses to which the banana is put are thus referred to: "The banana when fully grown is peeled and boiled or steamed in an earthenware pot. The leaves are used for plates and dishes, for thatching houses, for clothing, for mattresses to sleep upon, for pipe stems, and many other things. The skins of the fruit are used for making soap, and the stems for rope, &c."

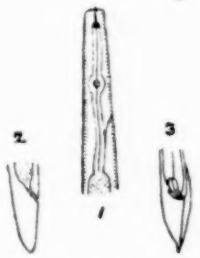
The author makes no allusion to, and perhaps may not be aware of, the fact that free nematoids are frequently to be found in the roots, stems, and leaves of plants, and that they are known to be found in the roots at least of the banana as it grows in Eastern Australia. The best known of the plants to be affected in this way are wheat, the common teasel, the feverfew, the cucumber, and the banana. In my "Monograph on the Anguillulidæ or Free Nematoids"[1] after referring to the mode of infection by wheat owing to the young nematoids passing from the earth in which wheat is growing, getting between the sheaths of its leaves and proceeding thence onwards to the immature germens, I say: "In several grasses I have found different species of these free nematoids lying between the inner sheaths of the leaves near the bottom of the culm. In Festuca elatior I met with no less than five species in this situation belonging to the genera Dorylaimus, Mononchus, and Plectus; and in the stalks of wheat and oats removed from stubble fields I have frequently found specimens either of these genera or of Rhabditis, Aphelenchus, or Cephalobus."

Many years since I ascertained that the nematoids which were to be found in the nodosities on the roots of certain cucumber plants in this country belonged to the genus Tylenchus and some years later (in 1879) I received an interesting pamphlet from Dr. Bancroft of Brisbane on certain "Diseases of Animals and Plants" from which I found that a very similar disease was common in Queensland among the bananas. From the merely rough figures there given of the worms it seemed to me evident that these nodose roots of the banana are also infested by nematoids of the genus Tylenchus. The females become so enormously distended with embryos that they assume somewhat the shape of a

[1] Transactions of the Linnæan Society, vol. xxv., 1865, p. 88.

Florence oil flask, so that Dr. Bancroft spoke of them as "flask-worms." I have found the mature worms, also assuming the same kind of shape in cucumber roots and from the same cause. Dr. Bancroft makes the following statements in regard to the occurrence of such worms in the roots of bananas: "The root of Musa maculata breaks off where the worm colony has been located; the sugar banana is more tolerant of the parasite and does not break off. This latter is the species of Musa which produces the fruit now sold in Brisbane." He found nematoids also in vine roots, in the roots of many culinary vegetables, and likewise in various weeds, particularly Sida retusa.

Sir Patrick Manson in his description of the embryo of Filaria perstans in Quain's "Dictionary of Medicine"[2] says, in regard to one of its distinguishing characters: "From time to time a minute tongue-like organ is rapidly protruded and withdrawn at the extremity of the cephalic end." A reference to Plate X., Figs. 109, 112, 115 and 117 of my "Monograph on the Anguillulidæ" will show in each of the four species of the genus Tylenchus there represented a short spear-like body of the kind referred to,[3] and the only other genera of free nematoids in which bodies at all like this are met with are Aphelenchus and Dorylaimus. I reproduce drawings of the anterior and posterior extremities of one of these species of Tylenchus which was many years ago discovered by me in "sandy soil, about the rootlets of oats." This species has a blunt posterior extremity, such as is found in Filaria perstans, but in others it is sharp and pointed, as in the closely allied Filaria demarquayi.



Tylenchus obtusus. 1, Anterior extremity of worm. 2, Posterior extremity of female. 3, Posterior extremity of male. × 150 diameters.

The probability seems great, therefore, that the embryos found in the blood of human beings and known as Filaria perstans are really embryos of some species of Tylenchus; and further, as a species of Tylenchus has been found in Queensland by Dr. Bancroft infesting the roots of bananas, it seems quite possible, looking to the facts revealed by Dr. Christy, that a nematoid belonging to the same genus may infest the roots and perhaps different parts of the bananas in Equatorial Africa.

The modes in which the natives use the different parts of the banana would make it possible for them to be infected either (1) through the skin or (2) through the alimentary canal. The fact that free nematoids can penetrate in some way through the skin—perhaps through the perspiratory ducts—is, I think, clearly shown by what is known concerning the parts of the body principally infested by Dracunculus. The evidence seems overwhelmingly in favour of this mode of infection, as originally suggested by H. J. Carter, and against a now commonly received view that the nematoids, through the intermediation of a cyclops, are taken into the alimentary canal with unfiltered water that has been drunk. It is quite possible that in some experimental investigations in which the young of the guinea worm were associated with these entomostraca, Fedschenko, the author of this latter view, may have seen young nematoids bore their way into the abdominal cavity of a cyclops, and yet his hypothesis as to the manner in which human beings become infected with guinea-worms may be wholly incorrect. As I long ago pointed out in a memoir on the guinea-worm[4] infection through the alimentary canal cannot reasonably account for the well-attested fact that in four-fifths or more of the whole number of recorded cases of guinea-worm the worms have been situated in the subcutaneous tissue of the lower extremities, and mostly below the knees, of persons who are in the habit of going about with bare legs and feet. The exceptions, too, are of a kind to prove the rule of external contamination, seeing that the Indian water-carriers, who bear on their backs water in leather bags or in skins, are not infrequently affected with guinea-worms in such exceptional situations as the back and the loins. Major Harrington of the Indian Medical Service, who has seen more than 200 cases of guinea-worm disease, is also firmly convinced that the views now commonly received are erroneous, and he has added further evidence in support of Carter's original view and direct external contamination.[5]

Although, therefore, I freely grant the possibility of such direct infection through the skin I think the evidence in regard to Filaria perstans points strongly to infection through the alimentary canal. The use by the natives of the banana leaves for "plates and dishes" would probably be one means by which infection could be thus brought about.[6] There is the further fact that in the cases where mature specimens of the so-called Filaria perstans have been found, they have been situated not in the subcutaneous tissue in any part of the body but, as Dr. G. C. Low says,[7] within the abdomen and "in the connective tissues of the mesentery." Without much difficulty we may imagine some of the young worms, taken into the stomach with food, boring their way through the intestinal canal after the fashion of embryo trichinæ and then, instead of wandering far, settling in the mesentery or in adjacent parts and there undergoing development. From such a situation it would be very easy for the young worms to pass into the lymph stream and thence into the blood.

I have thought it well to direct attention to the possible mode of infection and to the real nature of the organism hitherto known as Filaria perstans in order that those who have the opportunity may search for worms in connexion with the banana having the characters of Tylenchus, may ascertain whether they are to be found in the fæces, and may also look to the characters of the œsophagus and pharynx in any of the adult specimens of the so-called Filaria perstans that may be found in the mesentery.

My observations, as well as those of others, on the free nematoids have made it perfectly clear that a parasitic stage forms no necessary part of their life-history, though many of the forms may and do become parasitic in a more or less accidental manner—partly infecting various portions of plants and partly different tissues or organs of various animals. As facultative parasites, whether in animals or in plants, they commonly attain a very much larger size than that which characterises them in the free state, and instead of producing a small number of ova or embryos they commonly give birth to these in prodigious quantities. The most notable example of both these peculiarities is to be found in the guinea-worm.

Manchester-square, W.

[2] Article: Filaria Sanguinis Hominis.

[3] This is described by me (loc. cit., p. 125) as "an exertile spear with a trilobed base."

[4] Transactions of the Linnean Society, vol. xxiv., 1864, pp. 102 and 106.

[5] Brit. Med. Jour., vol. i., 1899, p. 146.

[6] Of course, leaves of young plants or leaves proceeding from the stem at no great distance from the root would be most likely to be contaminated with the nematoids. The chance of infection in the manner I have indicated is also distinctly favoured by the fact that Tylenchus is one of the only four genera of nematoids in which a power of resisting prolonged desiccation exists. This subject I considered pretty fully in a memoir "On the Anatomy and Physiology of the Nematoids, Parasitic and Free" (Philosophical Transactions, 1866, pp. 613-619).

[7] Reports of the Sleeping Sickness Commission, No. 2, p. 69.

NEW WORKHOUSE INFIRMARY.—The new workhouse infirmary for Swansea was formally opened on Jan. 18th in the presence of a large gathering. The building, which has taken about two years in construction, has been erected at a cost of £17,730.

THE OSIRIS PRIZE.—The *Electrical Engineer* of Jan. 22nd states that this valuable prize has just been divided between Madame Curie (in recognition of her part in the discovery of radium) and Professor Branly (inventor of the system of wireless telegraphy which bears his name). The prize is worth £4000 and was offered by M. Osiris in 1900 for any work which should be deemed useful for mankind by the members of the Syndicate of the Paris Press. The prize remained undistributed until it was recently suggested by the founder that the claims of the Curie family should be considered. It was then decided that Madame Curie should receive £2400 and that the remaining £1600 should go to Professor Branly.

A CONTRIBUTION TO THE AFTER-HISTORY OF GASTRIC ULCER.

BY JAMES W. RUSSELL, M.A., M.D. CANTAB., M.R.C.P. LOND.,
ASSISTANT PHYSICIAN TO THE BIRMINGHAM GENERAL HOSPITAL.

THE majority of the histories recorded in this paper were collected a few years ago with the object of obtaining some definite information as to the ultimate ending of cases of gastric ulcer treated on medical lines—using the term "gastric ulcer" to include the various painful sequelæ as well as the actual continuance of ulceration. The inquiry was made in the hope that its results would be of service in pointing out the cases suitable for surgical interference and the stage, if any, at which it is fair to assume that medical treatment has finally failed to bring about a cure of the condition. I happened at the time to have under my care in the out-patient room an unusual number of cases of long standing and of very intractable nature, in which medical treatment both in the wards and outside had served only to procure temporary relief; and I was much impressed with the miserable mental and physical condition of the patients. On the other hand, the mortality of the operation of gastro-jejunostomy—at any rate at that time—was very considerable and it seemed to me to be a serious step to recommend so grave an operation unless the condition which it was intended to remedy either was one with a material death-rate of its own or involved permanent crippling of the life of the patient. I therefore tried to obtain some answer to the following questions: 1. What proportion of cases of gastric ulcer treated medically end ultimately in death apart from those which terminate fatally in the first attack? 2. What proportion end sooner or later in complete recovery? 3. What becomes of those cases which end neither in death, from the complaint nor in complete recovery? 4. At what point of the case may medical treatment be considered as having failed and what is the bearing of relapse on this question?

As I could not succeed in obtaining from medical literature any satisfactory answer to these questions, I gained the permission of my senior colleagues at the Birmingham General Hospital to follow up the after-history of the cases of gastric ulcer which had been treated in the medical wards of that hospital from the beginning of 1892 to the middle of 1899 and it is by their kindness that I am enabled to publish the results of the inquiry. My questions were sent out some three years ago and the near limit was fixed so as to give a minimum after-history of about two years. Any attempt to go further back than 1892 was found to be useless owing to the shifting character of the poorer population of this town. I have recently endeavoured to bring the inquiry up to date but have only succeeded in obtaining further particulars in 16 of the cases. Only female cases have been inquired into on account of the greater certainty of the diagnosis obtaining in women. Moreover, only those cases have been accepted in which there has been a definite history of hæmatemesis and, with one exception, the date of the first hæmorrhage has been taken as that of the onset of the disorder. I am, of course, aware that the mere occurrence of hæmatemesis, even when accompanied with gastric pain and vomiting, is not conclusive proof of the existence of an ulcer, and it is, moreover, highly probable that in many of the cases ulceration had taken place some time before the occurrence of hæmorrhage. But worse fallacies would probably have been involved in any other method of selection.

During the seven and a half years covered by my first inquiry there were admitted into the medical wards of the hospital 89 women with hæmatemesis diagnosed as due to gastric ulcer, excluding the cases ending fatally in the first attack—the indications for surgical treatment in the latter being already well established. Of these 89 cases I succeeded in tracing the after-history of 47 and of 16 I have recently obtained further particulars. The length of time over which the histories extend varies within wide limits and the value of the results necessarily diminishes with the shortening of the period covered. Starting from the first hæmatemesis the length of the cases has been as follows: from two to three years, 12 cases; three to four years, five cases; four to five years, nine cases; five to six years, seven cases; six to seven years, three cases; seven to eight years, two cases; eight to nine years, one case; nine to 10 years, three cases; 10 to 11 years, two cases; and 12 to 13 years, three cases.

1. *Mortality* (Cases 1 and 2).—At the time at which the main inquiry was made two deaths only had occurred, though a third patient died in hospital from ruptured pyosalpinx a few months after answering my questions and was found post mortem to have an extreme hour-glass contraction of the stomach. Of the two former deaths, one only was directly due to the gastric ulcer—whether from perforation or not I cannot say, the note merely stating that the patient had died from "a return of her former complaint." The second patient died from acute tuberculosis four and a half years after her hæmatemesis, but I have no information as to the continuance of gastric symptoms in the interval. No further death was recorded in the 16 cases of which I have obtained recent particulars. The direct mortality from gastric ulcer has therefore, as far as my information extends, amounted to only 2·1 per cent. But it would of course be altogether inaccurate to represent this as the final mortality of the series, for the length of history in a large number of the cases is insufficient to warrant any conclusion as to their ultimate ending. Moreover, the fact of death may quite possibly be one element in causing the disappearance of the untraced cases, and the mortality in these may therefore not improbably amount to a considerably larger figure. It occurred to me, however, that if any material proportion of these untraced cases had died directly from the effects of their disease a record of some, at least, would probably be found in the registers of the other hospitals of the town. But no such record was forthcoming. By the courtesy of the staff of the Queen's Hospital I was permitted to examine the in-patient register of that hospital, with the result that I did not find the names of any of the 42 untraced patients amongst either the admissions for, or the deaths from, gastric ulcer. I have also searched the surgical register of the General Hospital and have been allowed to examine the record of deaths occurring in the Birmingham Workhouse Infirmary, with the same result. Yet the disasters of gastric ulcer are of so urgent a nature as to lead to admission into hospital to an extent probably out of proportion to their actual frequency and I cannot but think that if death were a common result some at least of the untraced patients would have died in one or other of the public hospitals of the town. It must, however, be remembered that I am dealing exclusively with patients of the female sex and that marriage, with its consequent change of name, is one possible cause for loss of identity. It is further worth noting that out of 6040 deaths occurring in the workhouse infirmary from 1892 to 1901 only two were attributed to gastric ulcer. There were, of course, other deaths from "peritonitis," and it is possible or probable that some of these may have been due to the perforation of a gastric ulcer, especially as post-mortem examinations had not, I believe, been made in all the cases. But it seems clear at all events that gastric ulcer is not a frequent cause of death in the institution and the net result of my inquiries is to show that, apart from first attacks, the disorder is one with but a small mortality.

2. *Recovery* (Cases 3 to 15).—13, or 27·7 per cent., of the patients, reported themselves as having had no return of their complaint. One, however, remarked that she was still liable to indigestion if she took improper food and another is seldom able to take meat without discomfort. The period of immunity has been as follows: from two to three years, two cases; three to four years, two cases; four to five years, four cases; five to six years, three cases; six to seven years, one case; and seven to eight years, one case. Seven other patients, or 14·9 per cent., suffered from stomach symptoms of some severity or from definite relapses for periods after their first attack varying from a few months to six years, but had remained in good health when the last report was obtained for a sufficient length of time to justify their inclusion in the class of recoveries. The histories of these patients are of especial interest from their bearing on the question of recovery after relapse. I therefore give their reports in detail.

Duration[1] five to six years.—Case 16. Admitted for hæmatemesis, October, 1898. "Always in pain" (December,

[1] From first hæmatemesis to last report.

1900). "No further attack and am now in good health" (December, 1903). Case 17. Hæmatemesis, April, 1898. Admitted for pain and vomiting, October, 1898. "Three slight attacks in autumn of 1899, spring of 1900, and October, 1900." No further return (December, 1903).

Duration six to seven years.—Case 18. Admitted for hæmatemesis, May, 1897. "One attack, February, 1898. Since in good health" (December, 1903). Case 19. Admitted for hæmatemesis, October, 1897. "Several attacks of sickness for three months after leaving hospital. No further return" (December, 1903).

Duration nine to ten years.—Case 20. First hæmatemesis, 1891; second, July, 1894. Out-patient for pain and vomiting, November, 1897, and May, 1898. "Now in good health" (December, 1900).

Duration 10 to 11 years.—Case 21. Hæmatemesis, 1890. Admitted with pain but no hæmorrhage, January, 1892. No further return (December, 1900).

Duration 12 to 13 years.—Case 22. First hæmatemesis, 1891. Admitted with relapse and hæmorrhage, July, 1893. "Three further attacks in next two and a half years. Since in good health" (December, 1903).

One other patient (Case 23) technically comes under this heading inasmuch as she is now free from all stomach symptoms though suffering for several years after her discharge from the hospital. But her inclusion is inadmissible owing to the performance of an operation—possibly gastro jejunostomy—four or five years ago. She was admitted into hospital for hæmatemesis in October, 1894. In December, 1900, she reported that she had "suffered severely with her stomach since," that an operation had been performed in 1899, but that she was "now suffering and unable to work and could not digest any solid food." In December, 1903, however, her medical attendant informed me that she had completely recovered and was now free from all gastric symptoms. In this case the connexion between the operation and recovery is by no means established but it is only fair to add that I have not been able to satisfy myself from the hospital records that the operation of gastro jejunostomy was certainly that which was performed. Omitting this case from the calculation it will be seen that in the other seven the periods of immunity have amounted at the time of the last report to from two to three years in two cases, from three to four years in one case, and from five to six and six to seven years in two cases each. Accepting these cases as cured there is therefore a total of 20 recoveries, or 42·6 per cent.

3. *Doubtful cases.*—Three cases, or 6·4 per cent., are difficult to classify. The patients have all suffered from stomach symptoms since their discharge with periods of more or less complete immunity, but either the interval since the last attack has not been of sufficient length to afford ground for any definite conclusion as to the ultimate results or the evidence of recovery given is unsatisfactory. The reports are as follows:—

Duration two to three years.—Case 24. First hæmatemesis, 1898. Admitted with relapse and hæmorrhage, June, 1899. No further return but still gets occasional attacks of "bile" (December, 1900).

Duration five to six years.—Case 25. Admitted for hæmatemesis, January, 1895. Readmitted for relapse without hæmorrhage, March, 1898. "Very sharp attack, April, 1899, which left her very weak for some time and slight attacks in between. Now fairly well" (December, 1900).

Duration 10 to 11 years.—Case 26. Hæmatemesis, 1889. Admitted with relapse and slight hæmorrhage, December, 1894. "Very ill in 1896 and slight attacks since, but at present time feeling stronger" (December, 1900).

4. *Non-recovery.*—The remaining 21 patients, or 44·7 per cent., reported themselves as still suffering from their complaint. In the first seven cases there were repeated attacks of pain and vomiting, with or without hæmatemesis, but with intervals of comparative immunity.

Duration two to three years.—Case 27. Admitted for hæmatemesis, September, 1898; remained well for six months. Then readmission for severe hæmorrhage. Second relapse, but without hæmorrhage, October, 1900. This patient died from ruptured pyosalpinx and was found to have hour glass contraction of the stomach. Case 28. Admitted for hæmatemesis, November, 1898. Remained fairly well till beginning of 1900. Readmitted March, 1900. Frequent attacks since August (December, 1900).

Duration four to five years.—Case 29. Admitted for hæmatemesis, May, 1899. Readmitted with relapse and hæmorrhage, March, 1901. Two or three attacks since (December, 1903). Case 30. Admitted with hæmatemesis, April, 1899. Three slight attacks in latter part of 1900 and beginning of 1901. Two "bad attacks" in July, 1901, and October, 1903. Case 31. Admitted with hæmatemesis, March, 1896. In workhouse infirmary with hæmorrhage, 1897, and remained there for 17 months. Out patient with relapse, January, 1900.

Duration seven to eight years.—Case 32. First hæmatemesis, 1896. Admitted with relapse and slight hæmorrhage, March, 1898. Three subsequent attacks, three weeks after leaving hospital, November, 1898, and March, 1900. Now in good health (December, 1900). "Complaint returns every winter. At hospital with same complaint last November" (December, 1903).

Duration nine to ten years.—Case 33. First hæmatemesis end of 1894. Admitted February, 1895. Readmitted for hæmorrhage, July, 1898. "Still suffering from pains in stomach" (December, 1900). Third hæmatemesis, 1901, and "still gets occasional attacks of vomiting with intense pain" (December, 1903).

The remaining 14 patients were suffering more or less continuously.

Duration two to three years.—Case 34. Admitted for hæmatemesis, April, 1898. "Never lost the pain since, but no more hæmorrhage." Last seen October, 1900, with bad attack of pain and vomiting. Case 35. Admitted for hæmatemesis, October, 1898. "Continuously bad since leaving hospital. Sickness every day except for first six weeks" (December, 1900). Case 36. Admitted for hæmatemesis, October, 1898. Pain and vomiting at intervals for next year, with readmission for second hæmatemesis. "Several attacks since leaving hospital and never well for long." Out-patient with recurrence of pain, November, 1900, and again in April, 1901. Case 37. Admitted for hæmatemesis, November, 1898. "Two attacks since leaving hospital and just out of Homœopathic Hospital. Has suffered a great deal of late and is unable to follow her employment" (December, 1900). Case 38. Admitted for hæmatemesis, November, 1898. "Complaint returned a week after leaving hospital. The attacks have been so frequent that she could not say how many she has had" (December, 1900). Case 39. Admitted for hæmatemesis, January, 1899. Two attacks since leaving hospital in January and July, 1900. Has been under out-patient treatment "suffering great pain and does so now" (April, 1901). Case 40. Admitted for hæmatemesis, February, 1899. "The attacks are very frequent. Can only keep very small quantities of milk on her stomach" (April, 1901).

Duration three to four years.—Case 41. Admitted for hæmatemesis, February, 1897. "No return, but has been a great sufferer from indigestion and is now under treatment" (December, 1900).

Duration four to five years.—Case 42. Admitted for hæmatemesis, July, 1896. "Moderate pain on and off since leaving hospital. Last week or two, increase in pain" (December, 1900). Case 43. Admitted for hæmatemesis, March, 1899. "Fairly well for the first 12 months, but since has felt very bad and sick about every fortnight. Has had a turn lately" (April, 1901). "Still keeps very bad" (December, 1903).

Duration five to six years.—Case 44. Admitted for pain without hæmorrhage, 1895. "Continuously bad since." Readmitted for profuse hæmorrhage, January, 1900, and again admitted, December, 1900, with bad pain and doubtful slight hæmorrhage. "Life not worth living."

Duration eight to nine years.—Case 45. Admitted for hæmatemesis, February, 1895. Second hæmorrhage, July, 1898, and readmission with pain, November, 1898. Then nine months in bed at home and three subsequent admissions into Homœopathic Hospital. "Just returned after being there for 16 weeks" (December, 1900). "Much better the last three years, but not so well lately. Still under treatment at the hospital" (December, 1903).

Duration 12 to 13 years.—Case 46. Probable slight hæmatemesis, 1891 or 1892. Admitted for severe pain, October, 1893. Readmitted, February, 1894, and October, 1896, the latter time for hæmatemesis. "A good many attacks since then" (December, 1900). "Still frequent pain and vomiting. More hæmorrhage three weeks ago" (December, 1903). Case 47. First hæmatemesis about 1889. Further attacks, but without hæmorrhage, 1891 and 1895. Admitted with pain and vomiting, December, 1896. "Several attacks since leaving hospital. Bad attack

with hæmorrhage four months ago" (December, 1900). "Not been free from her complaint for any length of time. Now under treatment and is told that she is in danger of a relapse" (December, 1903).

To sum up, the result of the inquiry is as follows. The direct mortality from the disorder has amounted to 2·1 per cent. 4·3 per cent. of the patients have died from intercurrent disorders, one of them with serious organic disease of her stomach. 42·6 per cent. have ended in recovery—unless the subsequent history disproves the statement—27·7 per cent. having had but a single attack and 14·9 per cent. having recovered after one or more relapses. One patient recovered after operation but is not included in the calculation. 6·4 per cent. of the patients cannot as yet be classified; they appear to be on the border-line between recovery and continuance of the disorder and may eventually fall into either class. Finally, 44·7 per cent. were suffering from stomach symptoms of more or less severity at the time of the last report, 14·9 per cent. getting repeated and definite attacks with intervals of immunity and 29·8 per cent. suffering from almost continuous pain. It would be unwise to attempt to draw any definite conclusion as to the number of cases in the last group in which it would be advisable to recommend surgical interference. In all probability some of the patients will ultimately recover, whilst it is quite possible that a direct examination of others would show that their reports have erred on the side of exaggeration. In others, again, the amount of suffering appears to be comparatively small. But on the whole, I am inclined to think that the group affords some justification for the plea often made in favour of more frequent resort to operative interference in persistent cases of gastric ulcer, always providing that the mortality of the operation can be kept at a really low figure and that the results in the cases operated on can be shown to be permanently good. But at the present time further evidence on both these points seems to me to be needed.

5. *Bearing of relapse on recovery.*—It will be remembered that seven patients suffered from continuance of their symptoms for some time after leaving the hospital but had remained in good health for periods amounting to two or more years at the time of their last report. In two of these there was a second hæmorrhage; in the others it is either clear that no further hæmorrhage had taken place with the recurrence of symptoms or the report is indefinite on the point. Of the three border-line cases hæmorrhage recurred in two and in the third is uncertain. On the other hand, of the 21 cases of non-recovery a further hæmorrhage took place with certainty in nine, whilst in a tenth case the history of the second hæmorrhage is not quite trustworthy. In two of the cases a third hæmorrhage is recorded. Of the 13 definite instances of recurrent hæmorrhage, therefore, only two are included in the list of recoveries. It thus appears that whilst a second hæmorrhage by no means precludes recovery it is a serious factor in prognosis, pointing at least to a considerable prolongation of the period of active symptoms.

The following list gives the intervals between the first and second hæmorrhages. Recoveries: from one to two years, one case; and from two to three years, one case. Non-recoveries: under one year, two cases; from one to two years, five cases; and from three to four years, two cases. Finally, the period over which symptoms continued to recur in the seven cases of ultimate recovery has been as follows: three months, one case; nine months, one case; from one to two years, one case; from two to three years, two cases; from four to five years, one case; and from seven to eight years, one case.

Birmingham.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, MARYLEBONE ROAD, N.W.—Madame Melba has promised to sing at a concert in aid of Queen Charlotte's Hospital to be held at Queen's Hall on the afternoon of Thursday, May 5th.

EDUCATION OF TOWN CHILDREN IN VILLAGE SCHOOLS.—Mr C. C. Lempriere of the Red House, Marston Moor, York, has sent us a pamphlet in which he suggests that children of the poorer classes at present educated in the schools of the large towns should be sent to the country for 10½ months of every year. Mr. Lempriere thinks that physical, mental, and moral advantages would result to the child if this scheme were adopted, while the consequent building up of the national health, physique, intelligence, and *morale* would be an advantage to the State.

NOTES ON A CASE OF OTITIC CEREBELLAR ABSCESS; EXTRADURAL ABSCESS; TREPHINING MIDDLE AND POSTERIOR FOSSÆ; RECOVERY.

BY PERCY JAKINS, M.D. DURH.,
SURGEON TO THE CENTRAL LONDON THROAT AND EAR HOSPITAL.

A GIRL, aged 12 years, attended the out-patient clinic of the Central London Throat and Ear Hospital on June 15th, 1903, complaining of offensive purulent discharge from the left ear, accompanied by severe pain over the left mastoid and in the posterior triangle, nausea, vomiting, and vertigo of four days' duration. The patient was admitted at once as an urgent case and the following history was elicited. The discharge had followed scarlet fever nine months previously. There had been no decided pain till four days previously. The left meatal canal was found to be filled with a yellowish-green offensive discharge which when removed revealed granulations. There were partial right facial paralysis, slight want of grip in the right hand (the patient was right-handed), both knee-jerks were exaggerated, the left pupil was dilated, there were left optic neuritis and drowsiness, the tongue was foul, the temperature was subnormal (97·2° F.), and the pulse was 72. There was a distinct tuberculous history but no specific treatment had been adopted. On the following day (the 16th) the patient was placed under chloroform and the part having been shaved and rendered aseptic a semilunar incision was made over the left mastoid from the lower border of the temporal muscle to the apex of the mastoid; the periosteum was then reflected and the cartilaginous part of the meatus was separated from the osseous. The ear having been drawn forward the antrum was explored and was found to contain granulation tissue; this was curetted and a purulent discharge was seen issuing from a small aperture in the upper and posterior part of the antrum. This wound was enlarged and about a teaspoonful of very offensive pus was liberated; the bone around, which was very soft and carious, was freely curetted. During the next five days the patient improved considerably, the nausea, vomiting, and vertigo partially subsiding and the morning temperature falling to normal and the evening to subnormal. On the 22nd the discharge from the mastoid became very offensive, the patient getting drowsy; her head was retracted, the lips were parted, the pupils were dilated, especially the left, the grip in the right hand was feeble, cerebration was very slow, the tongue was very foul, the temperature was 98°, the pulse was 60 and intermittent, and the respirations were 24. On the next day the symptoms were more defined; the patient could not speak, was unconscious except when pinched, and could not understand what was said; the right hand was absolutely helpless, the hands were cold, and the head was hanging over the edge of the pillow. On the 24th the former mastoid incision was reopened and more carious bone was removed from the roof of the antrum, but no pus was found coming from the former situation. The skin incision was then carried upwards, the temporal muscle was divided, the periosteum was reflected, and a piece of bone was removed by the trephine, these procedures causing rather severe bleeding. On removing the disc of bone the dura mater was found to be very tense, bulging into the trephine opening, but there was no pulsation; the dura mater was divided and a long thin knife was passed into the cerebral tissues. No pus was found and serous fluid escaped freely. The bulging of the cerebral tissue into the trephine opening resisted all efforts at replacement. It was now decided to explore the posterior fossa. A curved incision was made through the scalp down to the bone, one and a half inches behind and a quarter of an inch below the centre of the external auditory meatus. A disc of bone was removed by the trephine exposing the dura mater; this had a healthy appearance; it did not protrude but pulsated distinctly. The dura mater was divided and a long thin knife was passed inwards and upwards in the direction of the original opening in the posterior antral wall with the result that pus of a very fœtid kind flowed over the knife. A Horsley's pus seeker was next used and the abscess cavity was entirely emptied of its contents to the extent of about 12 drachms of pus. The point to be here noticed is that as

soon as the pus was evacuated the protrusion of the brain substance into the opening of the middle fossa subsided and pulsation reappeared. Fine catgut sutures were used to stitch the dura mater in the temporo-sphenoidal opening, three medium-sized drainage-tubes were inserted into the opening into the posterior fossa, and the superficial tissues were all stitched up. On the next day the patient was quite conscious, talking and answering questions at once, the grip in the right hand improved, there was no nausea or vertigo, and the paralysis of the limb was gone. The pupils were still dilated, the temperature was normal, the pulse was 88, the respirations were 22, and she wished to eat and to read. The discharge being abundant the patient was advised to lie on the affected side so as to aid drainage. On July 1st the stitches were all removed and the opening of the temporo-sphenoidal region was perfectly healed. On the 15th exuberant granulation tissue was interfering with free drainage; this tissue was curetted (under an anæsthetic) and the tubes were re-inserted; this secured better drainage and for the next ten days the patient was very well; there was no paralysis, nausea, vomiting, or vertigo; she ate and slept well and increased in weight; the temperature was absolutely normal both morning and evening and the pulse was regular, varying between 88 and 100. On the 25th the patient complained of slight headache and nausea; the temperature was subnormal and the pulse was 96, but on regulation of diet and attention to the primæ viæ these symptoms disappeared and she was sent to the Royal Free Hospital as the wards of the hospital were closed for the annual cleaning. She was discharged from the Royal Free Hospital the following week, all symptoms having disappeared except the facial paralysis and slight discharge from the external meatus. On August 13th a slight fluctuating swelling was noticed over the posterior fossa opening, which on being incised let free a little pus which appeared superficial. On Sept. 6th the patient for the last three weeks had had slight oozings from the opening that was made on August 13th. She seemed to be quite well but was not gaining flesh; the temperature was subnormal and the pulse was slow. She was readmitted into the Central London Throat and Ear Hospital and on Sept. 8th it was decided to explore the posterior fossa and on re-opening the wound and incising the thickened dura mater about one ounce of purulent pus was evacuated. One large drainage-tube was inserted and removed and cleansed every day. The drainage-tube was gradually shortened and on Nov. 2nd it was left out altogether. On the 13th the patient was discharged cured, facial paralysis being the only symptom left.

This case shows the advisability, in cases of suppuration of the middle ear which do not yield rapidly to treatment, of the radical operation being seriously considered, not only with a view of arresting the discharge from which the patient suffers but to prevent deeper mischief, such as cerebral abscess. During the last few years I have operated upon four cases of cerebral abscess caused by extension of mischief from the middle ear. For the full notes of the foregoing and for the necessary after attention upon the patient I am indebted to my colleague Dr. A. Wylie.

Harley-street, W.

THE EFFICIENT TREATMENT OF CARDIAC FAILURE.[1]

BY ALEXANDER MORISON, M.D. EDIN., F.R.C.P. LOND. & EDIN.,

PHYSICIAN TO OUT-PATIENTS AT THE GREAT NORTHERN CENTRAL HOSPITAL; PHYSICIAN TO THE CHILDREN'S HOSPITAL, PADDINGTON-GREEN.

IT has been told of a late distinguished physician that having met a practitioner in consultation on one occasion who had failed to discover a pericarditis, and who was somewhat chagrined thereat, he told him he might console himself as, had he discovered it, he might have attempted to treat it. Had this great physician's praise of therapeutic inactivity ceased with this narrative it would have been well, but he exalted the wisdom of doing nothing in the presence of imperfect knowledge to such a pitch of virtue that the profession of medicine as distinct from surgery was largely reduced within the sphere of his influence to rational attempts at diagnosis and prognosis, the inculcation of a moderate life, and the supervision of esculents, all doubtless very important considerations in their own place, as everyone knows. It is true that in many departments of medicine our knowledge is still so imperfect, and must probably for long remain so, that we have still to step in the house of life with gentle tread in these regions, but there are also many contingencies with which we have to grapple in which life is lost by the baneful influence of a timidity in therapeutics begotten of a pessimistic *non possumus* emanating from some authoritative source and paralysing for a time at least the therapeutic activity of considerable sections of the profession. Masterly inactivity has its place, but so also has fighting to a finish, be it in victory or in defeat.

There is no department of medicine over which the physician has more control than that which holds diseases and disorders of the heart, and it is in this sphere that I wish to preach a greater, yet always circumspect, boldness of treatment than at times obtains. By heart disease in this connexion I mean all conditions of the central organ of circulation which directly or indirectly, immediately or remotely, sometimes or often, threaten the extinction of human life. It follows from this definition that the emergencies we have to contend with may be (1) of an acute, rapidly arising, and sudden character; and (2) of a chronic nature and acquiring, as we may term it, an ingravescent urgency. Both kinds must necessarily be associated with cardiac failure, threatened or accomplished, which may or may not end in death—an event only too commonly observed in these circumstances. The scope of our subject and the limits of time will preclude its detailed consideration, but I shall, I trust, be able to lay before you a sufficiently comprehensive survey of the whole matter.

It is not my intention to burden the text of this paper by narrating cases but to emphasise the value of boldness as a principle or line of conduct in the treatment of heart disease, in certain typical circumstances, all precautions being taken to render a bold initiative likely to succeed and not to be more disastrous than the grave and respectful witnessing by the expectant physician of the practically unaided attempts of life to escape from the grasp of death. Any occasion for a rational boldness of conduct implies some urgency in the situation to be contended with. In using the term in connexion with the treatment of heart disease it is, of course, not my intention to urge that we should declare ourselves foolish by rushing in with a multifarious armamentarium where the wise would fear to tread but to lay before you some considerations which I hope will be freely discussed and which have been borne in upon me by my own experience and a study of that of others—that is, by my own failures and successes and a consideration of those of others. This has impressed me with the belief that while it may often be our duty to change our methods, and even to retreat from a given line of attack, there are circumstances when such a strategic movement towards the rear may seem highly advisable, but in which, nevertheless, the only possibility of saving the patient consists in our going boldly forward with all the forces at our command and pressing the attack quite home; in which, in short, the cartridge has to be cast aside and the enemy's entrenchments cleared with the bayonet if possible. Indeed, to continue our military metaphor, when brought face to face with any case of heart disease we must of necessity in the first instance reconnoitre the threatened danger carefully and learn what we can of its nature. We must endeavour, in other words, to make a correct diagnosis and to estimate aright, so far as possible, the conditions of the neural, muscular, hæmic, and mechanical factors in the action of the heart and the relation of that constantly acting organ to surrounding parts. We may find on examination so little amiss that the enemy, instead of being boldly attacked, may merely require to be kept under observation, or even ignored. Before doing this, however, we must be certain, if possible, that a more serious, and it may be sudden, onslaught is not masked by apparently trivial symptoms. Many of us can recall the trifling pains resembling those of dyspepsia or a slight muscular rheumatism which have suddenly revealed their true nature by an onset of unmistakeable and it may be fatal angina pectoris. Such signs after middle age or in advanced life should never, especially in the presence of signs

[1] A paper read before the Æsculapian Society on Jan. 22nd, 1904. The portion dealing with the muscular factor was also read before the West London Medico-Chirurgical Society on Dec. 4th, 1903, under the title "On Boldness in the Treatment of Heart Disease."

of organic lesion, be dismissed as trivial even though the ignorant may regard us as alarmists. On the other hand, even in the presence of gross disease, if we can satisfy ourselves that with all the signs of disease in the cardiac mechanism present the evidences are absent of any serious disturbance of the innervation, muscular force, or blood distribution of the case before us, it may be our duty to advise a continuance of even strenuous exertion, to avoid that mental dissolution of energy to which cardiac patients are peculiarly prone. In acting thus it is quite possible that the ignorant who at one time regarded us as alarmists may now consider us rash. But the force of criticism depends upon its source and those only who have smelt a good deal of powder can speak with weight of the conditions of battle. It may require some boldness in practice to lay a man by the heels in bed who imagines he is fit to run a race and to send another on a journey who imagines he ought to go to bed, but this is not the chief form of boldness in the treatment of heart disease with which we have to deal this evening, although these are considerations which must be mentioned in discussing the efficient treatment of cardiac failure.

The danger which threatens life from heart disease may, as I have remarked, be of unexpected and sudden origin and may have to be met by the physician with the promptitude which characterises the surgeon's action in dealing, for example, with an obstructed trachea or a severed blood vessel. Or it may be more or less remote or ingravescent in its urgency, when the physician, like the surgeon contemplating an unavoidable but not immediate operation, has time to observe his patient and to prepare him for the ordeal. This similarity of the situation of the surgeon and physician in these circumstances is one which I desire to emphasise this evening. The surgeon knows his instruments and the anatomy of the patient and has confidence in his power in a large proportion of cases of coming to the rescue with beneficial effect. Let us also, as physicians, in dealing with accomplished or threatened cardiac failure imitate the precision and cautious boldness of his methods instead of preaching the doctrine of a depressing therapeutic pessimism and uttering platitudes concerning the inscrutability of natural processes, or by action inscribe ourselves on the roll of the disciples of that popular professor the late Mr Micawber of expectant memory, and we shall find both the utility of our endeavours and the dignity of our office enhanced. No more than the surgeon can the physician be invariably successful; but let us, like him, by the forethought of our preparations and the skilful use of the powerful agents we, like him, possess, act when occasion arises with all the trenchancy, boldness, and hopefulness which the conditions involved permit and we may deserve the success we cannot always command. You will not expect me, for it would within the limits of our time be an impossible task, to deal fully with the etiology of cardiac failure and to set forth at length the factors which determine our action in particular instances, but there are some considerations which must, however cursorily, be mentioned in any rational consideration of so important a topic as the management of serious heart disease.

We are all aware that when the contractile efforts of the heart removed from the body—the eviscerated heart—begin to fail they may be urged to fresh vigour by stimulants applied to the organ. We also know that the rapidity with which the irritability of the cardiac muscle responds to such stimuli bears some relation not only to the state of the muscle fibre but also to the shock preceding the evisceration of the organ and conveyed to it through the nervous system or to the nature of some poison causing death which has reached it by the channel of the blood. I do not wish you to conclude that my knowledge of the effect of shock on the heart is based upon what the prejudiced and ignorant critics of scientific inquiry term ruthless vivisection for the satisfaction of scientific curiosity. For although the most precious possessions of mankind have come to them, with the sanction of an all-wise Creator, through the medium of one or other form of sacrifice or suffering justified by the greater good accruing, he libels us, at times fortunately to his very material cost, who accuses us of inflicting wanton suffering on dumb animals to wrest even a valuable secret from nature.

My own knowledge of the effect of shock on the eviscerated heart is based upon experience, not in what "our friends the enemy" term the shambles of the physiological laboratory, but in shambles where Gog and Magog prepare the Gargantuan feasts of which the antivivisectionist has doubtless on many occasions been a proud participant. However observed, it may be assumed as fact that, given a tolerably active muscle, the extinction of its irritability bears a direct relation to the shock of disease or injury which precedes cardiac failure. It is more easy, therefore, other things being equal, to revive the unshocked than the shocked heart which has failed, and for the same reason the sudden overthrow of a heart by, for example, the rupture of a valve is a more dangerous event than the gradual extinction of its power by slowly established and progressive disease. In proportion to such degree and urgency of failure must be the always circumspect and cautious but nevertheless necessary promptitude and boldness of our own endeavours to relieve or to save, provided the physical conditions involved admit of the display of boldness without aggravating the situation.

The object of these preliminary remarks is that in dealing with any case of cardiac failure we must bear in mind the predominance of the rôle which may be played by one or other, or by one or more, of the four factors in cardiac action already mentioned—namely, the neural, the muscular, the hæmic and the more purely mechanical factors in such action, and by our estimate of the nature and gravity of their disorder be guided in the choice of bold action or alert observation. In the first place let us consider shortly the influence and management of disorder of the *neural* factor.

Cardiac failure to a profound degree may be observed without pain but not necessarily without shock. The profound syncope, for example, attending violent explosions of epilepsy cannot be dissociated from shock, although it is the shock which attends surgical operations under anæsthesia, for the cerebral cortex is placed out of action by the vascular mechanism which produces the fit before the actual convulsions occur. Again, in debilitated states slight exertion or excitement or a minimum of suffering may have the same effect, the resulting phenomena being to all intents, though for a time only when recovery takes place, those of death. During such a phase of cardiac failure, whatever other agents we may use such as nitrite of amyl, atropine, or strychnine, we must promptly endeavour to rescue the patient by the employment of artificial respiration with forcible expiratory compression, which succeeds in proportion to the resiliency of the thorax or by this means in conjunction with firm but careful and rhythmical tongue traction. Experience alone can fully impress one with the value of these methods in these circumstances. But a still more dreaded expression of disorder of the neural factor in cardiac failure is that attending cardiac shock when the cortex is in full activity. The dead heart of angina pectoris is a flaccid diastolic heart, the failure of which may be progressively determined by auscultation during the agony. In such cases rescue, when possible, is only to be effected by the prompt use of the rapidly acting nitrites, and failing these by the sufficient employment of morphine and atropine, or by these combined if need be with volatile anæsthetics. The late Dr. George Balfour of Edinburgh, the keynote of whose methods in the treatment of cardiac failure was one of boldness and who would not have lived in vain had he done nothing more than preach this doctrine, used large doses of morphine and even induced complete anæsthesia by chloroform in these circumstances. It may be necessary here also to employ artificial respiration and tongue traction, but the anginous patient requiring this manœuvre is usually past remedy. The future probably holds some still bolder method as a last resource which professional opinion is not yet ripe to approve. Many of you must have read with interest the account published in THE LANCET[2] of Mr. Arbuthnot Lane's successful restoration of a heart to action which had failed during an operation for appendicitis by passing his hand through the wound and grasping it through the diaphragm and thus stimulating it into renewed action. Just as we find we can rouse the eviscerated heart to contraction by manipulation, so Mr. Lane in this case roused the heart which had recently ceased to beat into fresh life. Such an experience, rendered possible by the study of life in the lower animals, is a fact which the reasonable antivivisectionist might well ponder, if such a being is to be found. It is difficult even with a flaccid abdomen to reach the heart adequately through the epigastrium, but it is well to attempt it, and it is certainly likely to be quite as successful as any pin-prick of the organ by acupuncture through the chest wall and is less likely to

[2] THE LANCET, Nov. 22nd (p. 1397) and 29th (p. 1476), 1902.

do mischief. It would be well always to add this manœuvre to the other details of artificial respiration during the expiratory phase. What I have said as regards the treatment of the shock attending cardiac pain applies likewise to that attending rupture of the valves or the condition so often simulating this—namely, a sudden rupture of established compensation in chronic valvular disease.

There are other neural accidents of a less urgent character which unchecked may lead to a fatal issue to which I might refer but the time at our disposal is short. I may, however, mention the tachycardia which may overtake a tolerably well-compensated heart affected with valvular disease. In such cases there are two agencies the value of which has been impressed on me by experience. The most important of these is opium in sufficient doses. The other is ice. This may be applied to the head, nucha, or præcordia with such continuousness as the state of the patient may permit. Dr. J. Barr of Liverpool appears to have found ice most useful as a vaso-motor stimulant (or sedative according as we may regard it) when applied to the abdomen. There are theoretical reasons which render the success of this procedure probable.

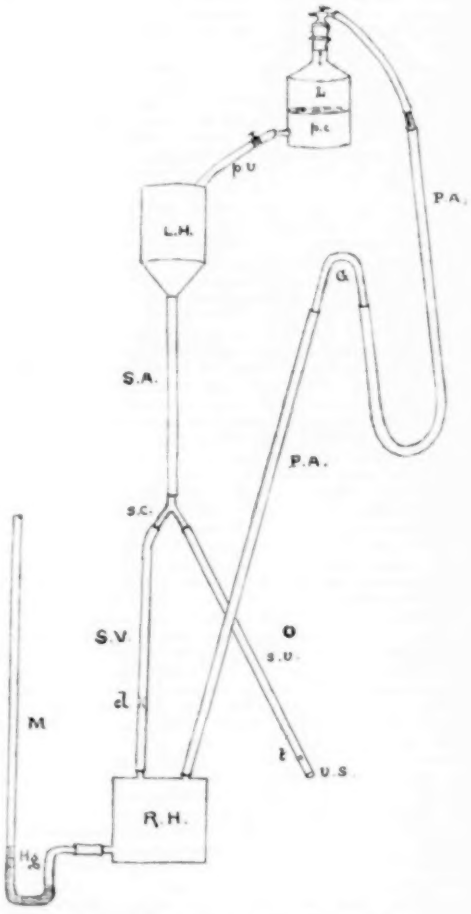
In considering the efficient treatment of the *muscular* factor in cardiac failure we have to deal with a subject of the greatest practical interest. By the muscular factor on this occasion I mean the cardiac muscle particularly and exclude from consideration the influence of the general musculature of the body upon the circulation, a detail which is of importance chiefly in less urgent phases of cardiac failure than those in which a judicious boldness in treatment is usually called for. A patient is before us with the evidences of progressive cardiac failure. He is dyspnœic in various degree, his cardiac area of percussion dulness is increased, he shows the evidences in the heart, and it may be in other organs, of the effects of a residual accumulation of blood within the chambers of the heart, right or left, or both right and left. We put him to bed, unload his primæ viæ, take into consideration his age and the general state of his vessels and other organs, as well as the particular condition of his heart endocardially, myocardially, and pericardially. Finding, as we unfortunately do in many cases, that rest, dietetics, and general care have, unaided, little effect on his state we try the influence of small doses of the infusion or tincture or powder of the well-known pharmacological antagonists to cardiac dilatation and imperfect systole, if the degree of failure and the anatomical conditions involved permit such tentative tactics; or combine these in certain circumstances with mercurials, neural stimulants, or more powerful vaso-motor agents such as the nitrites. Fortunately, in many instances these measures are soon successful. Not every abdominal case comes to laparotomy, nor does every cardiac case require a bolder method of control. But, on the other hand, many cases unfortunately *do* require such treatment if they are not to be allowed to drift into hopeless failure. The danger *then* lies, as in abdominal cases, in delay, with merely palliative treatment and the Micawber-like expectancy of something beneficial resulting from a timid use of agents and a plaintive hope in the recuperative powers of unaided nature. A large majority of the cases of which I speak are met with in people either young or in the prime of life. The vessels are pliant, the reserve force of the patient is commensurate with his development and age, but the golden bowl is broken and the silver cord is in imminent peril of being loosed unless we can effectively come to the aid of the labouring heart and surcharged venous system. How are we to do this? How is the patient to be prepared for the action of an agent which, held by the physician in a vial, is as powerful for good and for evil as the knife which the surgeon holds in *his* hand? The vascular system of the patient must be relieved of a certain quantity of blood if necessary, varying from four ounces to half a pint, by venesection which, for reasons we shall consider later, is more effective than leeching; his anasarcous limbs must be drained by Southey's tubes or by incision; fluid effusion hampering respiration in the chest or the abdomen must be removed so far as possible, and all this, not with any great expectation of these measures being successful in themselves, although this is not impossible, but to prepare the medical patient, as the surgeon prepares the surgical patient, for the use of the powerful agents which the physician has at his command. These are digitalis or its congeners in action, and of these, I think, we shall all agree that digitalis itself and strophanthus are the most useful, as they are also the most powerful, and that their tinctures, which contain all the active principles of the plant, are the most efficient as they are also the least irritating preparations of the drugs in cases suitable for the method I am about to describe. Small doses then in the majority of cases have previously been tried in vain; so far as we can determine the vessels in the case before us are sufficiently normal, and the heart itself is not tethered by firm extraneous adhesion so far as we can discover, or notably obstructed by aortic aneurysm, or occluded at its main arterial outlet by excessive obstructive disease of the aortic valves. These are important considerations in the use of digitalis, the employment of which in heart disease bears a certain analogy to the beneficial use of ergot in atony or fatigue of the uterus. I need not remind those with the obstetric experience of many of my present audience that the guide in the confident administration of sufficient doses of ergot is the presence or absence of a free uterine and pelvic outlet. So, too, from the bold use of digitalis we expect most benefit when the atonic heart lies behind an unobstructed aortic orifice and normal aorta. The fœtus in the one case and the blood in the other can then be shot out with least risk or distress to the propelling organ. Favourable conditions then being present, so far as we can determine, the drug may be given in ingravescent cardiac failure in 15, 20, 25, or 30 minim doses in the adult, at intervals of four hours, until a definite effect is produced upon the action, force, and capacity of the dilated and failing heart. This may require the continuous administration, in such doses, of the combined tinctures of strophanthus and digitalis, until from 200 to 300 minims have been taken. The patient may feel a little nausea at the end of the course but his labouring heart may be acting slowly, smoothly, and with increased force, and the patient himself experience a relief to which he has been a stranger for weeks. This effect may be permanent or it may be transient. The physician is not always successful any more than the surgeon. But both may have worked for and merited a success which they cannot always command. In laying emphasis on this principle of boldness in the use of the digitalis group in appropriate circumstances I am quite aware that I am not inculcating a new doctrine, for it is as old as Withering who first used digitalis with success in certain dropsies, of the organic cause of which he was ignorant, and it has been taught with no uncertain voice by others, and notably in recent times by the late Dr. George Balfour. But I defy anyone to say that it is not a doctrine which has been preached in large measure to deaf ears and we still find physicians, whether specialists or generalists, employing from week to week doses and methods which are little calculated to affect the action of the heart which underlies the clinical state I have described. One reason for which this bolder method of treating ingravescent cardiac failure has met with less recognition from the profession than it is, in my opinion, certain, sooner or later to secure, is, I think, the want of precision in the instructions given by those who have used it, in the preparation of the patient, and his management during the period of treatment. It must be admitted that this method is more conveniently carried out in hospital than in private practice and for obvious reasons. The family physician, from the multifarious calls made upon his attention, time, and strength, may find it, for geographical and other reasons, difficult to supervise and to carry out all these manœuvres with the care and closeness of observation which they require. But if it be the right course to pursue, and experience has convinced me that it is, in the circumstances I have briefly sketched, is the patient to be accommodated to the convenience of the practitioner or must the latter accommodate himself to the needs of the patient? This question requires no answer. Let the practitioner, therefore, have a trustworthy assistant or send his patient, rich or poor, where the method can be efficiently and as safely as possible put into execution. But, as a matter of fact, it is quite within the power of the practitioner to supervise his case sufficiently if he be provided with good nurses.

In an age of baths and exercises and foreign travel, all of which are very suitable for minor degrees of cardiac failure or after established convalescence from it, I am aware that it will take some time to convince the public, and if I may say so, with all due deference, some sections of the profession also, of the necessity or desirability of such boldness in the treatment of heart disease as I have described. But I

believe the days of the expectant physician's influence in this sphere are numbered, be he consultant or general practitioner, and that a few years will find these views generally accepted and acted upon. The task of testing the value of this bolder and as I believe more effectual method, however, and the education of the public to an admission of its necessity, which is commensurate with its gravity, lies largely in the hands of him who comes first in contact with these cases—namely, the general practitioner of medicine, who has already been the successful because convinced missionary of the necessity for boldness in the no more and no less important field of abdominal disease. But it may be asked, Is there not an element of unjustifiable risk in this rapid method of obtaining cardiac control? I answer no, provided such suitable cases as I have indicated be selected for submission to it and the effects of the drug be carefully watched, as is quite possible provided sufficient skilled supervison be exercised. I shall, however, answer the question also by asking another. Has the surgeon alone a prescriptive right to assume responsibility and to take risks in the attempt to save life? It may be contended that the cases are not parallel and that the surgeon operates when operation may not be free from danger to restore diseased parts to a normal condition or to a condition compatible with long life and that he has more control over the means he employs, whereas the physician is dealing with an already diseased organ which cannot be expected to be wholly restored to a normal state and lets loose forces which he cannot control so well. So much may be granted, but the physician's action if successful may restore comparative health, it may be for years or for a period, very beneficial to the patient and those dependent upon him, while the control of his agent merely requires skill and carefulness. The only alternative, moreover, is, in the majority of the cases in which the method is applicable, to stand aside and to watch the patient slowly or suddenly die or to play with remedies in an ineffective and irrational manner and in the fatuous hope that the *vis medicatrix naturæ* may in some inexplicable manner come to the rescue. Such a course, I submit, is neither fair to the patient nor becoming in the educated physician. But it is unnecessary to labour this point further, for the anæsthetist must, I presume, be regarded as a physician rather than a surgeon, and he daily administers an agent at considerable risk and sometimes with a fatal result, which is justified by his attempt to spare the patient pain and to shield him from shock under surgical procedures, at times still more dangerous, though justifiable, than the anæsthetic. The method of obtaining rapid control of the heart in cardiac failure is justified on the same grounds as the action of the surgeon—namely, the attempt to save life, while the risk the physician assumes in this matter is not greater than that assumed by the anæsthetist daily and indeed not so great. But the capable anæsthetist keeps a sharp eye on his patient's condition while submitting him to the drug and the physician who undertakes the rapid control of the failing heart must do so likewise.

The efficient treatment of the *hæmic* factor in cardiac failure takes into consideration the quality, quantity, and distribution of the blood. The influence of occlusion of the coronary vessels has, I think, been over-estimated. As Dr. S. West and Mr. J. Wickham Legg have shown, and as I also demonstrated in my lectures on Cardiac Pain,[3] the very free anastomosis between the right and left vessels secures an adequate blood-supply to the cardiac muscle even when one vessel is practically obliterated. It would be manifestly impossible to enter into a full discussion even of what we know of the quality of the blood in cardiac failure on the present occasion. The important bacteriological aspect of this question is still largely a matter of future knowledge although good work has already begun in this sphere. Nor is it necessary for me to insist on the importance of securing free aeration of the blood in acute cases, and if possible a normal percentage of hæmoglobin in the blood of chronic cases and in debilitated patients. Oxygen gas, so much used to-day, was also employed so long ago as in Hope's day in cyanosed conditions, although Hope probably never witnessed the installation of three or four cylinders of gas at the same time in the same bedroom, as has been suggested, to hiss health into the veins of ailing Croesus. Like others, I have used Brin's cylinders, but confess that I have never convinced myself that in cardiac cases they had any advantage over an open window, except perhaps in a turgidly cyanotic phase of cardiac failure. *Inflammation of the heart* may be regarded as directly due to defective quality of blood in most cases, but as serum therapy is still largely a question for the future to develop and to apply we must at present content ourselves with treating as efficiently as possible not the cause but the effects of inflammation. The remedy or assuaging agent *par excellence* in this condition is opium. Its efficient use requires its administration in sufficient quantity. The adult probably has frequently sufficient doses administered to him. But the fear of over-action often stays our hand when dealing with children. I desire to state that personal experience has convinced me that children the subjects of carditis can profitably take much larger doses of opium with benefit than is usually supposed, and that either by the mouth or hypodermically.

As regards the regulation of the *quantity* of the blood in cardiac failure one would have supposed that there would now have existed a general consent as to the mechanics if not the utility of blood-letting. But a recent correspondence in the medical press reveals the fact that there are those who question the possibility of temporarily relieving



Scheme of the systemic and pulmonary circulation.

the distension of an over replete right ventricle by this means. Were this scepticism limited to the question of the utility of *leeching* for this purpose I should feel disposed to agree with those who maintain that blood-letting in cardiac failure is of questionable use. But such consent

[3] THE LANCET, Nov. 1st (p. 1173), 8th (p. 1246), 15th (p. 1306), and 29th (p. 1443), 1902.

would not apply to the efficacy of venesection in this condition. The difference is due, I believe, to the greater *rapidity* with which blood going to the right heart is withdrawn by venesection as compared with leeching. It is a point which might easily be determined by the experimental physiologist if the opinion of the clinician were called in question. But the mechanical possibility may be demonstrated on a simple schema of the circulation which I have been in the habit of employing for the purpose. L.H. is a cistern containing water and representing the left heart; S.A. is the systemic arterial circulation; the Y-tube S.C. represents the systemic capillaries; while S.V. is the systemic venous system and *s.v.* a vein capable of representing a venesected vessel *v.s.*, and the perforation *l* at its distal end a leech bite. R.H. is the right heart to which is attached a manometer M, containing a column of mercury Hg. From R.H. issues the pulmonary artery P.A., passing to the bottle L, capable of being exhausted of air by aspiration and representing the lungs. Water aspirated into it, *p.c.*, represents the pulmonary capillaries, the fluid in which may find issue by a neck at the bottom of the bottle and be returned by tubing representing the pulmonary veins *p.v.* to the left heart. G is a glass U-tube which prevents collapse of the tubing if the lung bottle be placed at a lower level than the heart as it may be with equal effect. If when the apparatus is filled with water and the mercury stands at a certain level the vein *s.v.* be left open at its lower end *v.s.* (venesection) the mercury rapidly falls in the manometer. If the end of *s.v.* be held, but water be allowed to escape from the small hole *l* (leeching), the fall in the manometer is slow and slight. If with *s.v.* closed and the aspirated bottle in action the continuity of S.V. be momentarily interrupted at *cl.* the mercury at once rapidly falls in the manometer just as it does when venesection is represented. If S.V. be left uninterrupted the full aspiration of the lung L. has only small effect upon the mercurial manometer. The conclusion I draw from this simple experiment is that venesection is equivalent to interrupted inflow and that both enable the right ventricle and lungs to act more easily than when the former is over-distended, while the slow reduction of the total quantity of blood by leeching effects this purpose in a proportionately small degree. There is, indeed, a certain analogy between the processes for filling and emptying the venous system. Intracellular transfusion may be compared with leeching and intravenous transfusion with venesection. But intracellular transfusion is, on the whole, more potent in accomplishing the object for which it is undertaken than is leeching in that at which it aims to effect. Venesection is a temporary measure calculated to relieve the over-distended right heart, just as catheterism relieves an over-distended bladder. The quantity of blood, I need scarcely add, may also be reduced and regulated by a reduction and regulation of the quantity of food and drink and by the posture of the body as regards its accumulation in the right side of the heart. Graduated feeding is as important as graduated exercises when the latter are indicated. But this general truth does not impair the value of venesection as a temporary expedient.

By the *mechanical* factor in the action of the heart in this connexion I mean the *valves* of the organ. The influence of these structures when defective on cardiac failure and upon methods of treatment is proportionate to their degree of imperfection, whether the defect be obstructive or permit regurgitation. There are also important differences in the manner in which they manifest their influence according as the defective structure is in the left or the right side of the heart. While all the valves are naturally of prime importance for the due circulation of the blood, the aortic valve is probably the most important mechanical factor in the left and the tricuspid in the right heart. The brunt of systemic arterial pressure is spent on the valve at the aortic orifice, while dextro-cardiac propulsion through the homologous pulmonary arterial opening is largely aided by the inspiratory action of the lungs. Consequently failure at the aortic valve alone exerts a more important dilative influence on the left ventricle than failure of the pulmonary arterial valve alone does upon the right ventricle, when these conditions are gradually established by disease and are not due to sudden rupture. So much importance did Dr. George Balfour[4] attribute to the influence of incompetency in the aortic cusps that he advised even orthopnœic aortic cases to be placed recumbent, if necessary by the aid of chloroform, and kept so by means of opiates. That the physics of the circulation indicate this position as very advantageous in the circumstances cannot be doubted when it is possible to secure it without adding unduly to the repletion of the right heart and pulmonary circuit. But it must be borne in mind that the orthopnœic position itself is one not only indicative of the need for more air by the lungs but also of the necessity for less blood in those organs. Both these objects are accomplished in a measure by that position of the body. The uprightness of the venous column impedes the rapid entrance of blood into the right heart and utilises the liver reservoir, while the upright thorax permits of fuller respiration. This being so, treatment on the lines already indicated, when dealing with the muscular factor which may render recumbency more gradually attainable, appears in some cases to be preferable to Dr. Balfour's still bolder procedure.

A degree of tricuspid reflux appears to be a normal condition and the anatomical details of that valve seem to be adapted to allow of a certain amount of regurgitation into the systemic veins by a form of safety-valve action. This point has been exhaustively studied by Dr. G. A. Gibson of Edinburgh[5] who is of opinion that physiological and clinical experience support this view. But as the last barrier between the heart and the systemic venous system, the tricuspid valve may be considered as on a par in importance with the first barrier against arterial reflux—namely, the aortic cusps. When in cardiac failure their overthrow is consentaneous the triumph of death over life is all but accomplished. Even then, however, the patient *may* be snatched from the jaws of death by an efficient use of the lancet and digitalis, but a favourable issue cannot be predicted with any assurance. Defects in the right heart alone, or cardiac failure from purely pulmonary causes, such as pneumonia and emphysema, tend to deplete the left heart. The left ventricle of a fatal pneumonia, if the muscle have any native vigour, is found post mortem to be a small and contracted ventricle. It is the left ventricle of asphyxia in which true cardiac failure plays only a secondary part unless the heart be otherwise degenerated or defective. For this reason the digitalis group requires to be used with great caution, if at all, in these circumstances. If these drugs tend to afford a more powerful right ventricular systole, they also lessen the absorptive power of the left ventricle by decreasing its capacity. The bold use of digitalis is, therefore, contra-indicated in theory and prejudical in practice in such cases.

In conclusion, I feel that I should offer some apology for any apparent dogmatism in the manner in which I have treated this important subject and for not having referred more copiously to the work of others. The scope of the subject, the necessity for brevity, and the fact that I have only related what I have also witnessed and drawn conclusions by weighing actual experience must form my excuse for any appearance of having disregarded the published views of others.

Upper Berkeley-street, W.

[4] Clinical Lectures on Diseases of the Heart, p. 103. Third edition.

[5] Diseases of the Heart and Aorta, p. 610.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON THE TREATMENT OF TUBERCULOUS MENINGITIS.

BY JAMES GILROY, M.B., C.M., L.F.P.S. GLASG.

ON Oct. 10th, 1902, I was called to attend a girl, aged four years. On examination I found that she had widely dilated pupils, a slight elevation of temperature, and a very marked tendency to somnolence, from which condition she woke up at intervals and cried. The mother told me that the child had formerly been bright and cheerful but that of late she had become peevish and fretful. She vomited a good deal and it was evident that the meninges were engorged and the presumption from the family history was

strongly in favour of the disease being tuberculous. I attended this case daily, or almost so, until Dec. 22nd following and although for five weeks or more I was prepared for the worst, yet she eventually made an excellent recovery and is at the present moment quite well.

The method of treatment adopted was one which I have found successful in similar cases and the drug to which I give the major part of the credit was the liquid extract of ergot. I administered it in a four-ounce mixture along with bromide of potassium, iodide of potassium, and syrup of orange, the dose being five minims every two hours. The scalp was also shaved and at first ice was applied at intervals as indicated, after which an ointment of iodoform and vaseline was gently spread on the bare scalp every day.

On Dec. 11th, 1902, I was called to a married woman, aged 50 years, who had somewhat suddenly become delirious. A few days previously she had complained of dyspeptic symptoms. When I saw her she was lifting the coverlet of the bed to throw out some foreign guests which she thought apparently were present in myriads. The symptoms suggested delirium tremens, but knowing the patient well I was convinced that some other explanation must be sought for, and I accordingly came to the conclusion that the case was one of Bell's mania as described by Osler. Here also, just as with the previous patient, a combination of liquid extract of ergot with bromide and iodide of potassium acted wonderfully. The patient made a good recovery in three weeks.

Waterbeck, Dumfriesshire.

NOTE ON THE VALUE OF ICHTHYOL IN TUBERCULOUS GLANDS.

BY WALKER OVEREND, M.A., M.D. OXON.,
LATE SENIOR PHYSICIAN TO THE TOTTENHAM HOSPITAL.

ICHTHYOL has been administered with obvious benefit in many instances where suppuration has seemed imminent or has already taken place. I have prescribed it, in the form of two-grain pills, during the initial stages of erysipelas and have been much impressed by its power of inducing resolution of the disease. It has also been recommended in pulmonary phthisis when the cavities have become septic on account of the fact that it favours the process of desiccation. The above considerations led me to give it a trial in the treatment of the enlarged tuberculous glands of childhood. In a child, eight years of age, after an attack of influenza, a large mass which reached the size of a walnut formed on each side of the trapezius and appeared to be on the point of suppuration. There was some difficulty, however, in the exhibition of the drug. Even in solution with a large quantity of glycerine and peppermint the draught is particularly nauseous; in the liquid form ichthyol can hardly be taken. Made into a jelly with gelatine it is not much better and children, as a rule, will neither take pills nor capsules, but they will readily take tablets when made thin and rather smaller than the ordinary size. Tablets of ferrichthyol, each containing one and a half grains of ichthyol combined with iron, probably carbonate or reduced iron, were given three times a day after meals. After four days the glands began to diminish; in a fortnight the enlargements had vanished. The effect of each tablet was shown by a lowering of the temperature. In a boy, five years of age, sent to the seaside with a very large tuberculous lump beneath the jaw, perfect resolution was accomplished after a month's trial of the drug and the question of surgical interference was dismissed after the first fortnight. The treatment was supplemented by an open air life and an appropriate diet in which meat, milk, and eggs, with stimulant, were essentials. The effect, however, is much more marked if the glands have only recently become enlarged. But ichthyol should be given a trial in the chronic tuberculous glands of adults. At times these are liable to suppurate and to discharge for weeks together; ichthyol often checks the secretion and closes the sore.

Clacton-on-Sea.

A CASE OF ACUTE STRANGULATION OF THE INTESTINE BY AN INTRAPERITONEAL BAND.

BY HAROLD A. EASTON, M.R.C.S. ENG., L.R.C.P. LOND.

THE patient, a man, aged 61 years, was admitted into the Croydon union infirmary on Dec. 5th, 1902, with abdominal pain (which he referred to the region of the umbilicus), vomiting, and absolute constipation. The onset had been quite sudden on Dec. 1st. The abdomen was moderately distended and tender; palpation revealed nothing in the shape of a tumour mass. There were an inguinal hernia upon the right side and a scrotal hernia upon the left side, both of which, however, were reducible. On his arrival he was in a state of collapse but improved considerably when morphia was administered hypodermically. I diagnosed volvulus and operated on the following morning. Upon opening the peritoneal cavity an offensive smell was perceived. That portion of the small intestine which came into view was deeply congested and hæmorrhagic in places. The hernial orifices were occupied by gut which was easily withdrawn. There was nothing abnormal in the left iliac fossa but the intestine was tied down in the right iliac fossa and on pulling the incision over to the right side the cause of the obstruction was found to be a band about a twelfth of an inch in diameter. This I divided, ligaturing the divided ends. The constricted portion was no more than congested. As the condition of the patient forbade it I made no search for the connexions of the band but proceeded with the suturing of the abdominal incision. I noticed that the mesentery was drawn-looking and evidently cicatricial. There was no recent peritonitis. The peritoneal cavity contained a small amount of a dark, offensive-smelling liquid. The patient died an hour later.

At the necropsy the divided band was identified by means of the ligatures about the cut ends and its attachments were traced to the right internal abdominal ring. Previously it division it formed a loop immediately above and behind the entrance to the inguinal canal, which contained a hernia, and it was surprising that strangulation had been deferred for so many years. The attached ends were about half an inch apart and the total length of the band was one and a half inches. The peritoneum in this situation in particular was cicatricial and just above the attachment of the fatal loop a knuckle of ileum was firmly and closely adherent to it. The patient was evidently the subject of old peritonitis of obscure origin since his appendix was high up and free.

Thornton Heath, Surrey.

THE VERMIFORM APPENDIX ADHERENT IN A HERNIAL SAC AND SIMULATING AN ENCYSTED HYDROCELE OF THE CORD.

BY ARTHUR EVANS, M.S. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON, WESTMINSTER HOSPITAL; SURGEON TO OUT-PATIENTS, SEAMEN'S HOSPITAL, ROYAL ALBERT DOCK.

A BOY, aged three and a half years, was admitted into the Westminster Hospital on April 12th, 1902, with the following history. A swelling was first noticed in the right inguinal region when he was a year old; it was then about the size of a walnut. By the end of a year it had developed into a tubular swelling. The child had worn a truss from the time when the swelling was first noticed. The mother stated that the truss occasionally gave him so much pain that she was obliged to remove, it and this was sometimes the case even when the hernia was, so far as she knew, reduced. Nine months before I saw the boy he had been seen by another surgeon who made the note: "Swelling right inguinal region, probably encysted hydrocele of the cord, with a hernia, reducible." He recommended operation but the surgeon into whose wards the child was admitted did not deem an operation necessary, so the child was fitted with a truss and sent out. When I saw the patient there was a right inguinal hernia which was reducible, but on reduction an elongated swelling, which extended into the inguinal canal, could be felt lying above the testicle and separated from it by an interval; it was hard and rounded and felt like a very tense cyst; it could be reduced almost into the inguinal canal but not quite. It was considered to be a hydrocele of the cord and on account of the pain which the truss occasioned the child I decided to cure the hernia and the cyst of the cord at the same time.

On opening the hernial sac the appendix and the cæcum were found; the appendix was about four inches long, with its apex attached by a fibrous band to the lowest part of the sac. The appendix was amputated close to the cæcum, the gut was returned into the abdomen, and the hernial sac with the adherent appendix was dissected out and removed. Three sutures were put into the abdominal ring, the wound was sewn up and a collodion dressing applied; the stitches were removed on the ninth day. The child left the hospital

on the nineteenth day after the operation and has remained quite well up to the present time (1903).

Queen Anne-street, W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

MILL ROAD INFIRMARY, LIVERPOOL.

TWO CASES OF TUBAL GESTATION; RUPTURE; ABDOMINAL SECTION; RECOVERY.

(Under the care of Dr. NATHAN RAW.)

FOR the notes of the cases we are indebted to Dr. E. N. Cunliffe, assistant medical officer.

CASE 1.—The patient was a woman, aged 26 years. Two previous pregnancies had occurred, one seven years before and the other two years. The former pregnancy was followed by some inflammation of the appendages with pain in the iliac regions. The second pregnancy was apparently quite normal. The patient continued to suckle her second child till two or three days before admission. The periods were regular till September, 1903, when sudden cessation occurred. Total amenorrhœa followed without any irregular hæmorrhages. No other signs of pregnancy were noticed and pain was entirely absent. On Nov. 21st the patient was suddenly seized with a violent "cramp-like" pain in the lower part of the abdomen and she vomited. There was also a discharge of blood per vaginam. The pain increased in severity and on the 24th she presented herself for admission to the hospital.

On admission the patient was extremely blanched and collapsed. The pulse was of poor volume, low tension and thready, and could not be counted at the wrist. The heart beats were feeble and averaged 130 per minute. There were excessive pain and tenderness over the lower part of the abdomen which was somewhat distended. On vaginal examination a soft, boggy mass was felt in Douglas's pouch, pushing forwards a slightly enlarged uterus. A diagnosis of ruptured ectopic gestation was made and the advisability of immediate operation was considered. The extreme collapse of the patient and the consideration that the rupture must have happened three days previously led to operation being deferred till next morning. In the interval stimulants were cautiously exhibited and a quarter of a grain of morphine was administered to relieve the obvious anxiety.

Dr. Raw performed the operation. The condition of the patient had somewhat improved, the pulse being palpable at the wrist and averaging 126 beats per minute. Ether was chosen as the anæsthetic and was excellently borne. A median incision about three inches long was employed and on opening the abdomen there was an immediate outrush of a very large quantity of recent blood containing numerous clots. The blood was rapidly evacuated and the uterus and its appendages were explored. The left tube was apparently normal but the right tube was dilated and had evidently been the site of a tubal pregnancy. Its pedicle was defined and secured by double interlocking silk ligatures. The distal portion of the tube was then excised, together with the ovary. The abdominal cavity was irrigated with large quantities of hot normal saline solution. Bleeding had now ceased and the abdominal wound was stitched up in the usual way, a Keith's glass drainage-tube being left in the lower end of the wound. The condition of the patient materially improved during the operation, the pulse-rate falling to 112 beats per minute with improvement of its volume and tension. No fœtus was discovered although careful search was made in the blood clots evacuated. Examination of the diseased tube showed a mass of membranes containing an amniotic sac protruding apparently through the ostium abdominale so that the case was probably one of tubal abortion rather than tubal rupture. The further progress calls for little comment except to remark that the rectal administration of normal saline solution to the amount of a pint five or six times a day was of great service in alleviating a distressing thirst. The Keith's tube was left in for four days and caused a little local suppuration and the production of a sinus that healed with some difficulty. The patient was discharged cured on Jan. 9th.

CASE 2.—The patient was a woman, aged 28 years. She had had two previous pregnancies. The first, 11 years ago, terminated in the delivery at the sixth month of a still born child. The second confinement took place 15 months later, a normal, healthy child being delivered. There was no history of any pelvic trouble and during the following nine years the periods were quite regular. Two months before admission amenorrhœa established itself but this was the only sign of pregnancy observed by the patient. No breast changes were noted and morning sickness was absent. No vaginal hæmorrhages occurred and no pain was felt. On Nov. 26th she was suddenly seized with a violent pain in the lower part of the abdomen more marked on the left side. It was accompanied by vomiting and a discharge of blood per vaginam. The pain became more severe and on the 28th she walked to the receiving room of the hospital and was admitted.

On admission the patient was anæmic but no marked collapse was present though she complained of severe pain. The pulse averaged 72 beats per minute and was of low tension though of fair volume and regular rhythm. On examination there was tenderness over the lower zone of the abdomen on the left side and bimanual examination showed a well-marked, tender swelling of small size present in the left vaginal fornix. The uterus was slightly enlarged, the external os being occluded. In the absence of any signs of a persisting hæmorrhage it was decided to adopt an expectant line of treatment. A one-grain opium pill was administered to allay pain and next day her condition was materially improved, little pain being complained of. The pain disappeared entirely in the course of two or three days and abdominal palpation was readily borne and showed no definite swelling though bimanually thickening to the left side of the uterus was still felt. On the night of Dec. 7th without any apparent cause the patient was suddenly seized with a recurrence of severe pain in the left iliac region. She became blanched and collapsed and vomited and the pulse, though never exceeding 70 beats per minute, became thin and thready. It was decided to operate and she was taken to the theatre without delay.

Dr. Raw performed the operation. The same incision and procedures were adopted as in Case 1. The abdomen appeared to contain even more blood than in the preceding case. The left tube was found to be the site of a ruptured ectopic gestation and was removed, together with the ovary, after securely ligaturing the pedicle. Numerous adhesions, evidently formed at the time of the first rupture, were necessarily broken down in the removal of the tube and considerable oozing took place. One or two large vessels were secured and tied and all further bleeding ceased on pressure. Normal saline solution was again used to irrigate freely the lower abdominal cavity and a Keith's tube was inserted in the lower end of the wound. The fœtus was found free in the abdominal cavity. It was apparently about two months old, measuring 2·2 centimetres in length. The limbs were developed and the first rudiments of sex were observable. The Keith's tube was removed after the second day with the result that no sinus formation ensued as in the previous case. A small superficial stitch abscess formed at the upper end of the wound which otherwise healed by first intention. The patient was discharged cured on Jan. 14th.

Remarks by Dr. CUNLIFFE.—There has lately been a revival of interest concerning the symptomatology and treatment of ectopic gestation. The above two cases present symptoms of some interest and illustrate in a striking manner the advantage of early operation. Many authors have laid stress on the fact that ectopic gestations usually follow at a long interval of time a previous pregnancy and frequently there is a history of tubal or tubo-ovarian inflammation. The present two cases bear out these points. In the first case there was a history of previous pelvic trouble and the first pregnancy was succeeded by an interval of five years. Another uterine pregnancy then occurred to be followed after two years by an ectopic gestation; it is possible that the explanation of this is that in one case the ovum travelled to the uterus by a healthy tube; in the other it was arrested in a diseased tube. In the second case no history suggestive of inflammatory mischief in the tubes was obtained, but nine years elapsed between the uterine and the

ectopic gestations. Sir J. Halliday Croom[1] has recently laid stress on the occurrence of irregular hæmorrhages and pain in these cases, with aggravation of the early signs of pregnancy, such as breast changes and morning sickness. Neither of these patients exhibited any of these symptoms. The successful issue in these two cases shows the importance of abdominal exploration. The second case is particularly instructive as showing that even if hæmorrhage may cease for a time, yet in the absence of radical treatment recurrence may take place and operation have still to be performed, though under less favourable conditions.

The points of interest in the after-treatment were the successful employment of copious rectal injections of normal saline solution to relieve thirst and the importance of not retaining Keith's drainage tube more than two days in the abdomen.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Hour-glass Stomach.

A MEETING of this society was held on Jan. 26th, Mr. ALFRED WILLETT, the President, being in the chair.

Mr. B. G. A. MOYNIHAN read a paper on Hour glass Stomach. He said that by hour-glass stomach was understood that condition in which the stomach was divided into two portions by a constriction at any point between the cardiac and pyloric orifices. In one rare, in fact unique, case under his care the stomach was trilocular. In another there were three points of narrowing, one in the body of the stomach, one at or near the pylorus, and one about one and a half inches beyond the pylorus, in the duodenum. In this case there were four sacs. As a rule the cardiac complement was larger and had thicker walls than the pyloric. It dilated and became hypertrophied by reason of the great obstruction met with at the scarred and narrow isthmus which connected it with the distal portion of the stomach. The forms of hour-glass stomach were many. As a rule the constriction was near the middle of the organ or near the pyloric end. The isthmus might be very much indurated or it might be tubular with very little or no induration but with some thickening. In most instances the greater curvature seemed to be pulled upwards to the lesser, but in one case he had seen the lesser tucked down to the greater. The cause of hour-glass stomach was next dealt with. Mr. Moynihan stated that two forms were usually described—a "congenital" form and an acquired form. An examination of several specimens and an earnest search through the literature had convinced him that there was no proof whatever of the existence of an hour-glass stomach which was due to a congenital deformity. The absence of any observation of hour-glass stomachs in the fœtus or the young child was very striking. When those who had been describing their specimens used the word "congenital" they seemed to do so without thought or hesitation, accepting, it would appear, the mere existence of the deformity as unquestioned evidence of its congenital origin. So far as he was aware there was not a single specimen or an accurate record in existence which could be accepted as evidence of the congenital origin of this disease. The causes of acquired hour-glass stomach were (1) perigastric adhesions, (2) chronic ulcer, and (3) malignant disease. 1. Perigastric adhesions might arise from many causes. Most commonly they were due either to ulcer of the stomach or to gall-stone disease. 2. Chronic ulcer might cause hour-glass stomach in one of two ways. In the first there was a gradual deepening of the ulcer. As the ulcer approached the serous coat of the stomach a few adhesions formed binding the viscus to the anterior abdominal wall, preventing the bursting of the ulcer into the general peritoneal cavity. If the ulcer was on the posterior surface a soldering to the pancreas might result. When the stomach was anchored in its middle, the pouches on each side, but more especially on the cardiac side, showed a tendency to sagging, and this, with the cicatricial contraction taking place in the ulcer, resulted in hour-glass form of the stomach. In one of Mr. Moynihan's cases a malignant mass in the anterior wall had formed an extensive adhesion to the body wall. Another important factor in determining the narrowing of the stomach was spasm and recurring attacks of this nature led to hypertrophy of the circular muscular fibres, and this thickening, together with cicatricial contraction, was responsible for the narrowing found in hour-glass stomach. The symptoms and the signs of hour-glass stomach enabled a positive diagnosis to be made in the great majority of cases. First, if the stomach-tube was passed and the stomach was washed out with a known quantity of fluid, the loss of a certain quantity would be observed when the return fluid was measured. This was Wölfler's "first sign." Secondly, if the stomach was washed out until the fluid returned clear, a sudden rush of foul, evil-smelling fluid might occur, or if the stomach was washed clean and the tube withdrawn and passed again in a few minutes several ounces of dirty offensive fluid might escape. The fluid had regurgitated through the connecting channel between the pyloric and cardiac pouches. This was Wölfler's "second sign." If the stomach was palpated and a succussion splash was obtained, the stomach-tube passed, and the stomach apparently emptied, palpation would still elicit a distinct splashing sound. This was due to the fact that only the cardiac pouch was drained; the contents of the pyloric pouch remained undisturbed and caused the splashing sound on palpation. For this phenomenon Jaworski had suggested the appropriate name of "paradoxical dilatation." Von Eiselsberg had observed in one case that on distending the stomach a bulging of the left side of the epigastrium was produced; after a few moments this gradually subsided and concomitantly there were a gradual filling up and bulging of the right side. Von Eiselsberg also called attention to the bubbling, forcing, "sizzling" sound which could be heard when the stethoscope was applied over the stomach after distension with carbon dioxide. If the two halves of a seidlitz powder were separately given and the stomach was normal or dilated, no loud sound was heard anywhere except at the pylorus; if a constriction was present in the stomach a loud, forcible, gushing sound could be easily distinguished at a point two or three inches to the left of the middle line. The abdomen was carefully examined and the stomach resonance was percussed. A seidlitz powder in two halves was then administered. On percussing, after about 20 or 30 seconds, an enormous increase in the resonance of the upper part of the stomach could be found, while the lower part remained unaltered. If the pyloric pouch could be felt or seen to be clearly demarcated the diagnosis was inevitable, for the increase in resonance must be in a distended cardiac segment. If the abdomen was watched for a few minutes the pyloric pouch might sometimes be seen gradually to fill and to become prominent. Schmidt-Monard and Eichhorst had both seen a distinct sulcus between the two pouches inflated with carbon dioxide. Ewald had called attention to two signs which he considered of value in establishing a diagnosis. When the stomach was filled with water and examined by gastro-diaphany the transillumination was seen only in the cardiac pouch; the pyloric pouch remained dark. The deglutable indiarubber bag of Turck and Hemmeter was passed and distended. The bulging caused thereby was limited to the cardiac pouch which lay to the left of the middle line. The two aids to diagnosis of greatest value were, it will be seen, the washing out of the stomach and its inflation with gas by the administration of a seidlitz powder in two portions. The fluid used for the washing must be carefully measured before use; the tube was then passed and the stomach emptied, the contents were set aside in a separate dish, and the washing was commenced. All the fluid now returning was collected in a separate vessel and carefully measured. The two signs of Ewald were of little importance; a correct diagnosis could always be made without them. With regard to treatment, Mr. Moynihan said that in many cases of hour-glass stomach there was a narrowing not only in the body of the stomach but also at the pylorus. This illustrated the undoubted fact that gastric ulcer was often multiple. The result, so far as the treatment of the condition was concerned, was that in many of the cases no single operation would suffice to fulfil all the requirements. If gastro-enterostomy was performed from the cardiac pouch the pyloric pouch remained undrained. Symptoms of stasis were then observed, as in a case recorded by Terrier,

[1] Practitioner, November, 1903.

and a second operation was necessary. An anastomosis from the second pouch was obviously futile. A gastroplasty which relieved the obstruction in the body of the stomach did not deal with the pyloric narrowing. In many cases it was necessary to perform a double operation, gastro-enterostomy from both pouches, gastroplasty combined with gastro-enterostomy from the pyloric pouch, gastro-gastrostomy with gastro-enterostomy, or gastroplasty and pyloroplasty.

Mr. STEPHEN PAGET asked if any sort of bobbin had been used in performing the gastro-gastrostomies.

The PRESIDENT, after congratulating Mr. Moynihan on his paper, said that the observations on the so-called congenital hour glass stomach were of special interest and it seemed probable that it did not exist since no authentic instance of such a condition could be found. He thought that a good many instances of hour-glass stomach must be overlooked. He referred to the fact that the disease was more common in women than in men, 11 of the cases recorded being in women and seven in men. He asked if there was anything in the mode of living, occupation, or diet which gave rise to the greater frequency of hour glass stomach in the north of England than in London.

Dr. G. B. FERGUSON (Cheltenham) asked whether antiseptics had been used or whether the operation had been done with only aseptic precautions.

Mr. H. J. PATERSON referred to the somewhat high mortality in the series of cases. He related a case in which perforation of an ulcer had taken place near the pylorus in which an hour-glass stomach was found to be present and suggested that had an operation been performed on the hour-glass stomach at an earlier date the pyloric ulcer would have been relieved.

Mr. MOYNIHAN, in reply, said that he could not account for the greater prevalence of the hour-glass stomach in the north of England. The taking of large quantities of tea and dry bread was the only marked difference of diet. He had noticed that duodenal ulcers nearly always occurred in those who drank beer to excess. He thought the mortality was higher than it ought to be, but that was probably in part due to the ill-health of the patient produced by the prolonged disturbance of nutrition while the contraction of the stomach was taking place. The accumulation of fluid in the distal portion of the stomach which could not be washed out might also account for the increased risk of the operation. He only used a needle and thread in making his anastomoses and never used any antiseptic within the abdomen. He was of opinion that hour-glass stomach was much more common than was generally believed.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Jan. 22nd, Dr. FREDERICK TAYLOR, the President, being in the chair.

Dr. F. PARKES WEBER showed two cases of Diffuse Lipomatosis. The first case was that of a single woman, aged 34 years, who presented typical diffuse lipomata below the lower jaw, on the upper arms, and on each side of the front of the thorax. She had always enjoyed good health. The condition had been noticed for about two years and was unassociated with pain. She had been treated by thyroid tabloids. The second case was that of a man, aged 52 years, who was formerly a carman. There were huge lipomatous masses affecting the neck, arms, and pubic regions. They had first appeared in 1868, after an injury. There had been slight general wasting, in connexion with which it was suggested that there might be some cirrhotic change in the liver. The cases were shown mainly to illustrate the difference between diffuse lipomata and adiposis dolorosa.

Dr. A. E. GARROD exhibited a boy, aged ten years, with a Tumour of the Liver. When first seen, in August, 1903, he was said to have been ailing for a year and to have had pain and swelling in the left side. The liver was then much enlarged and reached below the umbilicus. It was firm and not tender. One large and several smaller swellings were felt on the surface of the right lobe near the costal margin, which were hard and yielded no fluctuation. The lymphatic glands in the neck were enlarged. There were double dacryocystitis, conjunctivitis, and interstitial keratitis more marked in the left eye. There were no changes in the fundi. The teeth were badly formed but were not characteristic of congenital syphilis. He had taken iodide of potassium almost continuously and the liver had diminished in size. It was thought that the tumour was probably of a gummatous nature but the diagnosis of hydatid had also been advanced. No blood changes had been observed.—Dr. G. A. SUTHERLAND thought that the hardness of the mass as well as the presence of old keratitis strongly suggested gummata. He suggested that mercury should be employed in the treatment.—The PRESIDENT asked if there had been pyrexia at any time and referred to a similar case recorded by the late Dr. J. S. Bristowe in the transactions of the society.

Mr. W. H. B. BROOK (Lincoln) showed a case of Total Paraplegia due to caries of the mid-dorsal vertebræ, for which the operation of costo-transversectomy had been performed with complete recovery. The patient was a youth, aged 18 years, the notes of whose case had been read before the society in March, 1903. The fact that the patient had undertaken a railway journey of over 100 miles was in itself sufficient evidence of the completeness of his recovery.—Mr. LAWRIE H. MCGAVIN considered that the thanks of the society were due to Mr. Brook for bringing the case before its notice and congratulated him upon such a successful issue.

Mr. J. R. LUNN showed: 1. A case of Chronic Periostitis (syphilitic) in a man, aged 28 years, affecting the lower ends of both femora. A skiagram was shown to illustrate the condition. 2. A case of Ununited Fracture of the Radius and the Ulna in a man, aged 74 years, which had existed for a period of 38 years. The accident was a compound one and when first seen he was advised amputation but he refused. 3. A boy, aged 13 years, with symmetrical swellings on the lower jaw. He was also the subject of congenital syphilis.

Mr. WALTER G. SPENCER exhibited a boy, aged ten years, with Bilateral Enlargement of the Testicles. Both testes were swollen to about adult size and were firmly elastic but not tender; the right was enlarged and the left was less so. A sinus existed over the front of each testis which had ceased to discharge pus and appeared to be healing. The patient did not present any further signs of past or present disease. An indefinite family history suggested both tubercle and syphilis. He had been under observation for three weeks and was treated with mercury internally and locally with a little iodide.—Mr. A. A. BOWLBY and Mr. RAYMOND JOHNSON agreed that the case was one of tubercle.

Dr. FREDERICK E. BATTEN showed a girl, aged five years, the subject of Complete Ophthalmoplegia Externa with Blindness of acute onset. 13 weeks before admission to hospital the child had whooping-cough, from which she recovered in about six weeks. One week before admission the mother noticed that the child could not see. At the same time it was noticed that the pupils were very large and she could not move the eyeballs. There was no loss of consciousness and there were no convulsions. On admission there was no ptosis but complete ophthalmoplegia was present, with a slight divergent strabismus. The pupils were widely dilated and did not react to light. There was complete blindness. There was slight optic neuritis, which was more marked in the right eye than in the left. There was no weakness of the muscles of the face, tongue, palate, or limbs. All the deep reflexes were abolished. 14 days after admission the movements of the eyes had become normal, the pupils were no longer so dilated, and the optic neuritis was much less. There was no return of vision and the knee jerks still remained absent. It was suggested that the case was one of polio-encephalitis inferior affecting the oculo-motor nuclei and the lower visual centres.

Mr. MCGAVIN showed a married woman with Complete Absence of the Phalanges of the Left Hand. The patient, who was the sole member of her family affected by any bodily deformity, was healthy in other respects. The skiagram showed that the whole of the phalanges had been suppressed.

Mr. JOHNSON showed a man, aged 28 years, with a Translucent Cystic Swelling of the Root of the Nose. The condition was first noticed about three years ago. No cause could be assigned and it had slowly increased without pain. The cyst gave a well-marked sense of fluctuation and its tension appeared to be quite constant. It was possible that it was of parasitic origin. Its extreme translucency rather pointed to the presence of a dermoid.

Mr. JOHNSON also showed a man, aged 47 years, the subject of Multiple Aneurysms, in whom an aneurysm of the right brachial artery was removed by operation in July,

1902. Other aneurysms were situated on the left brachial artery at the bend of the elbow and on the left popliteal artery.

Dr. WILFRED HARRIS exhibited two cases of Post-Diphtheritic Bulbar Paralysis. Both the patients were women, aged 25 and 29 years respectively. In the first case the condition had supervened four years ago, six weeks after a slight attack of ulcerated sore-throat, when she was found by her medical attendant to have paralysis of the soft palate. There were now almost complete paralysis of the orbicularis palpebrarum and orbicularis oris on each side, all the other facial muscles being normal, and complete paralysis of the soft palate, with paresis of the constrictors of the pharynx and of the abductors and internal tensors of the vocal cords, with considerable wasting of the tongue. The faradic reactions were very diminished. The second case was ten years ago very similar in appearance to Case 1 but the patient was now completely recovered after the paralysis had remained almost stationary for over four years. She had married and after the birth of her first child had noticed rapid improvement in the paralysed muscles.

Mr. CHARLES R. KEYSER showed: 1. A case of Congenital Elevation of the Shoulder in a girl, aged nine years. There was no history of injury or paralysis, nor was any other member of the family affected by any bodily deformity. There was no muscular paresis and the x rays did not show anything abnormal. 2. A case of Congenital Absence of the Fibulæ in a male child, aged two and a half years. There was bilateral talipes valgus and there were only four toes on each foot.

Mr. C. GORDON WATSON exhibited two cases of Osteitis Deformans in a man and in a woman, aged 73 and 33 years respectively. In the first case the left femur and the skull were principally affected, while in the second the left tibia was chiefly involved.

Mr WILLIAM H. BATTLE showed a case of Fracture-Dislocation of the Upper Cervical Spine in an Adult without Symptoms. The patient was a man, aged 56 years, who had fallen down a staircase a month before admission to hospital. A skiagram showed a fracture of the axis with displacement forwards of the atlas and the axis from the spine.

Mr. EDRED M. CORNER showed (1) a case of Fracture of both Pedicles of the Atlas and (2) a case of Fracture of the Body of the Fifth Cervical Vertebra. In both cases a considerable interval elapsed before the patients came to the hospital and in neither were there any paralytic or sensory symptoms. Mr. Corner considered that Mr. Battle's case and his own first case might be termed reasonably frequent fractures and that if skiagrams of the spine were taken in all cases of severely sprained necks a large proportion of them would, in all probability, reveal the presence of a fracture.

LIVERPOOL MEDICAL INSTITUTION.

Cerebral Thrombosis.—Cerebral Tumour.—Surgery of the Prostate.

A MEETING of this society was held on Jan. 21st, Dr. JAMES BARR, the President, being in the chair.

Dr. W. B. WARRINGTON read a note on a case of Cerebral Thrombosis clinically characterised by total aphasia but with retention of consciousness. The necropsy showed that the softening had occurred in the region of distribution of the middle cerebral artery and that it was in great part limited to the lower frontal convolution, temporo-sphenoidal, and angular gyrus on the left side.

Dr. WARRINGTON also gave an account of a case of Cerebral Tumour. The initial symptoms were loss of recollection, hallucinations of smell and attack of pallor, with erection of hair on the left side of the face. Later the classical symptoms of tumor cerebri developed, being ushered in by an apoplectiform attack in which consciousness was lost for nine days. An exploratory operation was performed by Mr. Rushton Parker and the Rolandic area was exposed, revealing œdema of the subarachnoid tissue and softness of the brain but no tumour or even marked tension of the brain. The operation afforded marked though temporary relief to the patient who died four months later. At the necropsy a tumour was found occupying the basal ganglia and the hippocampus major.

Sir WILLIAM M. BANKS read a brief paper on the Modern Surgery of the Prostate by way of introduction to a general discussion on the subject. He described a typical case of acute prostatic retention with its generally disastrous termination as the result of the treatment in vogue when he began practice and highly eulogised the splendid work of Sir Henry Thompson which had completely revolutionised the whole conduct of urinary surgery. Passing over Bottini's treatment by the electric cautery with the remark that it had not been practically tested in this country, he recalled the work of McGill of Leeds, whose method of attacking the gland from above by means of suprapubic cystotomy showed a fine combination of courage and originality. The mortality from hæmorrhage and sepsis was, however, severe and the operation did not gain ground. When Mr. P. J. Freyer made public his operation it was so novel in its character and so opposed in appearance to anatomical possibilities that many persons would not believe that it could be done and the attempt which had been made to deprive him of the credit due to him by saying that his operation was simply that of McGill was very paltry. Sir William Banks saw McGill's specimens and patients some 14 years ago and it was plain that his operation was mere nibbling in the effort to get away as much as possible of the gland and that by means of instruments. Freyer's operation was done with the avowed object of removing the whole gland bodily by enucleating it with the finger, even if the prostatic urethra had to go too. He referred to the magnificent specimens exhibited that night by Mr. Freyer and to his mortality of 10 per cent., a low mortality considering what was done and the age and the condition of the patients to whom it was done. Allusion was made to the operation of Parker Sims by which the gland was removed by the perineal route, an operation which, although apparently making great way in America, had so far not been extensively used in Great Britain. Coming to the question of double castration, Sir William Banks admitted the effect of the removal of the testes in diminishing the prostate but he was glad to think that it would ere long become a thing of the past. Mr. R. Harrison's excellent attempt to accomplish by the safe and easy operation of vasectomy any good that had been done by castration had not proved so successful as could have been wished. As soon as a man showed symptoms of enlarged prostate and did not completely empty his bladder he ought to draw off his water at night with the biggest soft catheter he could pass. Prostatotomy was valuable in certain cases. When a man having symptoms of a large prostate suddenly suffered from retention and instruments could only be passed with difficulty and suffering Sir William Banks had by the following operation obtained not only immediate relief but a permanent cure. With the patient in the lithotomy position the membranous urethra was opened. The floor of the prostatic urethra was deeply incised and the cut should go right up into the bladder so as to split any valve-like third lobe or a cervix-like protrusion. Next the prostatic urethra should be dilated to the utmost with the finger and the biggest possible glass tube should be inserted and worn at least for a month.

Mr. FREYER briefly referred to the various operative procedures which had from time to time been advocated in dealing with an enlarged prostate and as illustrating the uselessness of castration he exhibited a prostate which he had removed from a patient upon whom castration had been performed five years previously. The prostate was inclosed in a sheath formed by the recto-vesical fascia much in the same way as the rind incloses the edible portion of an orange. In enucleating a prostate the gland was shelled out of the recto-vesical sheath and as the prostatic plexus of veins was for the most part imbedded in the recto-vesical sheath there should not be much hæmorrhage during the operation. It was important to ascertain the condition of the kidneys before attempting enucleation, for in long-standing prostatic trouble there was always a danger of suppression of urine quite apart from the result of operative interference.

Mr. HARRISON said that he would confine his remarks to the influence that suprapubic prostatectomy as illustrated by Mr. Freyer's cases would be likely to have on the operative treatment of stone in the bladder complicated with such a degree of prostatic enlargement as to render the patient incapable of fully emptying his bladder or of doing so with a catheter. In such cases the expectancy of a recurrence of stone after its removal either by crushing or by suprapubic cystotomy was very great. In fact, under these conditions the obstructing prostate might be regarded as the principal factor in the formation or re-formation of

stone. He quoted examples where after litholapaxy had been employed on repeated occasions for recurrence of vesical calculus the concurrent removal of both stone and prostate had been followed by the complete and permanent recovery of the patient in the fullest sense of the term. He exhibited a stone and prostate which he had removed on the previous day from a patient who had undergone suprapubic lithotomy six months previously. Litholapaxy he regarded as the best and safest operation in uncomplicated cases of stone.

Mr. E. R. BICKERSTETH spoke of the great difficulty occasionally experienced in removing a small and hard prostate.

Mr. RUSHTON PARKER said that he could confirm Mr. Freyer's description of the so-called third lobe as being an integral part of one of the lateral lobes.

Mr. W. THELWALL THOMAS spoke in favour of the perineal route and said that when the enlargement was not very great the prostate could after free division of the capsule be enucleated as readily as by the suprapubic method. This latter method he considered more applicable when there was considerable prostatic enlargement.

Mr. F. T. PAUL said that he was a firm believer in the value of catheterism in prostatic retention. In many cases nothing more was required but in some a period came when operative interference was necessary. In his experience the advantages claimed for double castration and for vasectomy had not been fulfilled.

At the annual meeting of the society, which was held on Jan. 14th, the following list of office-bearers and members of council was adopted: President: Dr. James Barr. Vice-Presidents: Dr. H. Briggs, Dr. G. W. Steeves, Dr. J. R. Logan, and Dr. Joseph Wiglesworth. Treasurer: Mr. T. H. Bickerton. General secretary: Mr. F. C. Larkin. Secretary to the ordinary meetings: Mr. R. W. Murray. Secretary to the pathological meetings: Dr. W. B. Warrington. Editor of the Journal: Dr. F. H. Barendt. Librarian: Dr. A. S. F. Grünbaum. Council: Mr. H. Adcock, Mr. J. Bark, Dr. H. A. Clarke, Dr. A. Fisher, Mr. F. T. Paul, Dr. J. Pinkerton, Mr. W. Fingland, Dr. A. G. Gullan, Mr. K. W. Monsarrat, Mr. R. Parker, Dr. J. Hay, and Dr. Edgar Stevenson.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Acute Appendicitis: its Diagnosis and the Indications for Operation.

A MEETING of this society was held on Jan. 20th, Professor JOHN CHIENE, the President, being in the chair.

Dr. WILLIAM RUSSELL introduced a discussion on Acute Appendicitis by reading a paper which will be published in an early number of THE LANCET.

Mr. J. M. COTTERILL said that what the question really resolved itself into was the exact condition of the affected appendix and this was a much more difficult matter to determine than the mere presence of the disease. Widely different pathological conditions were classed under the term "appendicitis." Thus, catarrhal, suppurative, gangrenous, perforative, and fulminating cases were spoken of and conditions such as the following were met with—organismal invasion of varying intensities, embolic changes, ulceration, perforation, stricture, kinking, gangrene, abscess formation, and cellulitis of surrounding parts. Many of these conditions complicated and overlapped each other and made the exact diagnosis of the condition at the moment very often difficult and frequently impossible. With regard to the three cardinal symptoms of pain, tenderness, and rigidity of the lower right quadrant of the abdominal wall the following points were to be carefully noted. 1. Pain usually was first complained of over the affected appendix. It might next be referred to the umbilical or epigastric regions and later it appeared over the appendix again. Such erratic pains might lead to an error in diagnosis, as, for example, mistaking appendicitis for gastric ulcer. Pain increasing after the first 36 hours pointed to the formation of pus or to commencing gangrene of the appendix. The latter formed one of the most important indications for operation and therefore it was wise not to employ morphine which might mask the urgent symptoms. If the pain *slowly* decreased it pointed to a subsidence of the inflammation; if, on the other hand, the pain quickly disappeared, the case must be regarded with grave suspicion, as it frequently indicated gangrene. In such cases of "deceptive lull" the condition of the pulse, together with other symptoms, must be closely watched. Pain or frequency in micturition in many cases indicated that the appendix was dipping down into the pelvis. Many cases were cited to illustrate these various conditions. 2. Tenderness, as a rule, was a trustworthy symptom and was usually most intense at McBurney's point, but it not infrequently was found in other situations due to an unusual position of the appendix. Tenderness might be only elicited in a digital examination by the rectum or the vagina. 3. Rigidity of the lower right quadrant did not appear at once but only when pain was felt over the appendix and this rigidity was progressive. At a later period, if there were rigidity over the lower half of the abdomen, it pointed to pelvic suppuration and peritonitis, and if the whole abdomen were rigid general peritonitis was present. Vomiting was another symptom also of great importance. Constipation was the rule but diarrhœa was occasionally present and was unfavourable if there was also vomiting. Obstruction and tympanites were bad signs and frequently indicated general peritonitis. They occurred at a late period in the disease. If the temperature was moderate (from 102° to 103° F.) it was a good sign and it should begin to drop in the morning after the second day. A sudden drop in the temperature often indicated perforation but the condition of the pulse was a guide in such an event. A high temperature with remissions pointed to septic phlebitis or pyæmia. When ate it was an unfavourable sign. A quick, irregular, weak pulse out of proportion to the temperature and remaining at or over 100 after 24 hours, and especially if it tended to get still quicker and weaker, was a certain sign of a bad case. Rigors if present at an early stage and if frequent indicated gangrene (not pus formation), but if later septic absorption was present. Leucocytosis was suggestive but not conclusive evidence. Its presence was confirmatory but its absence proved nothing. The general expression of the patient (facies abdominalis) was a most valuable indication though it was common to all intense abdominal cases; in all of them it was a late and unfavourable symptom. Such symptoms as persistent vomiting, quick and weak pulse out of proportion to the temperature, abdominal facies, rigors, and tympanites pointed not to the threatening of a bad attack but to the fact that the patient had already had a knock down blow from the effects of which nothing might be able to save him. These very symptoms were those which, in the opinion of most operators, "indicated operation." Whether this knock-down blow should be waited for before operating was a question worth serious consideration. Mr. Cotterill summarised the indications for surgical interference as follows. In fulminating or perforating cases immediate operation was the only successful means of treatment. In other less acute cases the following points indicated operation: (1) vomiting continuing after 12 hours; (2) a pulse rate of 100 and upwards and out of proportion to the temperature; (3) a temperature suddenly falling or rising after the second day, especially if there were marked remissions; and (4) pain suddenly stopping or after the second day markedly rising (an indication of gangrene or the formation of pus). An acute onset of symptoms with rapid pulse, continued vomiting, and tenderness over the appendix without a tumour in the right iliac fossa should call for immediate operation. On the other hand, a quiet onset with a pulse rate under 100 and early formation of tumour in the right iliac fossa might allow of a safe delay but the surgeon should operate immediately on the first appearance of bad symptoms. In all cases an operation should be performed at once if the patient was far out of the way and could not be closely watched by the surgeon.

Dr. J. CRAWFORD RENTON (Glasgow) said that in 1901 he published a paper[1] in which he had classified acute appendicitis into three divisions: (1) ordinary catarrhal appendicitis not accompanied by distinct swelling; (2) appendicitis together with a distinct lump which might disappear or end in an abscess; and (3) burst appendicitis leading to general peritonitis. If a case of acute appendicitis was allowed to go beyond the second day it advanced into the second or third of the above divisions. If the appendix was removed at the end of the catarrhal attack the mortality was about ½ per cent. The deaths which occurred were not due to the state of the appendix but to some other complication. His practice now

[1] Brit. Med. Jour., May 25th, 1901.

was to take out the appendix at the very first—namely, on the first or second day, introducing one or two fingers through a small incision. In this way there was no risk of ventral hernia. If, however, the case were only seen on the third day it was better to wait for the interval. If suppuration had taken place a much larger opening was necessary in the abdominal wall. American surgeons hardly ever had a case of either suppurating or burst appendicitis because they invariably operated early. He thought that the leucocyte count was of the greatest value.

Mr. F. M. CAIRD said that he regarded cases of acute appendicitis as beginning with a rapid onset and terminating in resolution, operation, or death within 10 or 14 days. In fulminant cases the gravity of the situation was usually at once recognised and operation followed immediately. But when the onset was less acute he believed it was justifiable to temporise. He generally applied an ice-bag, washed out the rectum, and waited for a day or two. If when under observation the patient did not improve, or if he became worse, or if after a temporary lull symptoms again—within ten days—became exacerbated, operation was indicated. Under this treatment many cases got well and surgical interference could be carried out during a quiet interval. Others, again, derived benefit from the limiting peritonitis established during this short probationary period. During the last three years 22 cases of acute peritonitis had been subjected to operation in the wards under his care. Two died. They were usually admitted in the third or seventh day of the attack. The two fatal cases seemed hopeless from the beginning but two apparently equally so had recovered.

Dr. J. O. AFFLECK said that acute appendicitis was easily confounded with typhoid fever. There was great risk in giving patients purgatives and enemata; he had seen two cases in which an appendicular abscess was ruptured by an enema. As regarded treatment he had seen great benefit from the application of ice bags to the part—in fact, they seemed to remove the inflammation entirely and he had known of such cases not having a return of the symptoms during the next 20 years. His rule was that after a second of two well-marked attacks occurring within a year the operation ought to be performed after the end of the second attack.

Dr. W. HALDANE (Bridge of Allan), Dr. T. M. BURN-MURDOCH, Dr. JAMES RITCHIE, Mr. H. J. STILES, Mr. C. W. MACGILLIVRAY, and Dr. G. LOVELL GULLAND also took part in the discussion.

ABERDEEN UNIVERSITY MEDICAL SOCIETY.—A meeting of this society was held on Jan. 15th.—Mr. P. B. Roth read a paper on the Treatment of Scoliosis. He first discussed the etiology of the condition, pointing out that it occurred in girls and boys in the proportion of 6 to 1 and between the ages of five and 17 years as a rule. Scoliosis might be either osseous or postural. In osseous scoliosis there was bone disease and the condition was to that extent incurable. In postural scoliosis the curve in about one-half of the cases was a reversed C in the dorsal region, the position assumed when writing with one arm on the table. One third of the cases exhibited a reversed S curve, the upper concavity facing the left, and the lower one facing the right. The curves were occasionally reversed in these two subdivisions. Before describing the rational treatment Mr. Roth discussed the objections to such apparatus as those of Sayre, Noble Smith, Howard Marsh, and Adams. Shoulder straps, he said, caused sores in front and also an abnormal development of the pectoral muscles, while the muscles attaching the scapula to the spine became wasted. The result was that when the straps were removed the forward stooping was increased. Shoulder straps were useful only in dress to remind the patient that she was expected to brace back her shoulders; they should be made, however, so that they would break on too much pressure being applied. In addition to curvature the other symptoms of scoliosis were stooping at the shoulders and forward projection of the head, a flattened anterior thorax, and a bulging abdomen. It was essential to have the clothing removed in order to obtain a sufficient view of the spine and it was wise to take the position of the spine (1) with regard to the middle of lines extending between the inferior angles of the scapulæ (the shoulders being braced back and any inequality in the length of the two legs corrected by placing a block under the foot of the shorter leg) and (2) between the mid points of lines extending from the subcostal plane to the top of the iliac crests respectively. The patient should then be induced to assume the "best position"—i.e., one which made the spine most nearly approach normal. All subsequent treatment aimed at keeping this position during exercise of all sorts. Exercise was strongly advocated such as breathing movements when lying flat on the back or face in the "best position." This, combined with good food and plenty of fresh air, resulted in the development of those muscles which normally kept the spine in position. The muscular sense was markedly absent in the wasted muscles, as was seen by the grotesque attitude assumed by many patients when asked to put themselves in what they considered the normal position.—Mr. F. L. Keith read a paper on Eclampsia and Status Epilepticus.—At a meeting held on Jan. 22nd, Mr. James Clark presiding, Dr. George Stoddart read a paper on Opportunities of Study in Foreign Schools. Among the various subjects discussed reference was made to the treatment of syphilis by from 12 to 16 hypodermic injections of perchloride of mercury spread over a period of six weeks and to the use of alcohol for disinfection of the hands and for uterine douches. The hands should be scrubbed for five minutes with soap and water and then steeped in alcohol of 60 per cent. strength for other three to five minutes. This method gave better results bacteriologically than other methods in ordinary use.—Mr. Fife Slater read a paper on the Dieting of Infants. He said that the mother ought, if at all possible, to suckle her infant for the first six or nine months and the periods of feeding should be regular: every two hours during the day and every four hours during the night for the first month, every two and a half hours during the day and every four hours during the night for the second month, and so on. "Humanised" milk was the best to use where the mother could not give milk. If it was necessary to change from breast to cow's milk the change should be gradually effected, using whey or peptonised milk before beginning with cow's milk, which ought to be boiled before using. Bread jelly was preferable to artificial foods, but where it was found necessary to use artificial foods they were to be given only as subsidiary to milk diet and not as a substitute for it. Prolonged use of peptonised or sterilised milk was a frequent cause of scurvy and rickets.

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on Jan. 15th, Dr. P. McBride, the President, being in the chair.—Dr. W. H. Kelson showed (1) a case of Deformity of the Fauces in a Woman; and (2) a case of Epithelioma in the Cricoid Plate Region in a woman, aged 30 years.—Dr. A. Logan Turner showed a case of Affection of the Palate and Larynx in a man. The patient suffered from œdema and infiltration of the uvula, the left half of the soft palate, and the left lateral wall of the pharynx. There was infiltration of the epiglottis and both arytenoid regions. Dr. Turner considered the condition analogous to certain cases which Sir Felix Semon had shown at the previous meeting.—The case was discussed by the President, Sir Felix Semon, and Dr. J. Dundas Grant.—Dr. Atwood Thorne showed a case of Malignant Disease of the Nose in a man, aged 70 years.—Mr. H. B. Robinson showed: (1) a case of Syphilitic Necrosis of the Sphenoid Bone; (2) a case of Left Abductor Paralysis in a male, aged 31 years; and (3) a case of Syphilis of the Posterior Part of the Tongue and Posterior Pharyngeal Wall.—Dr. L. H. Pegler showed a case of Crumpled Septum in which he had excised the hard structures four years ago and in which the intact muco-perichondrium remained unstiffened.—Mr. P. R. W. de Santi showed: (1) a case of Laryngeal Vertigo; (2) a man with Tertiary Syphilis of the Larynx causing stenosis, on whom thyrotomy had been performed four years ago with satisfactory results.—Dr. StClair Thomson showed: (1) a case of Complete Paralysis of the Left Vocal Cord in a woman aged 36 years; and (2) cases of Bleeding Polypus of the Septum.—Mr. H. T. Butlin showed a specimen of Epithelioma of the Cricoid Plate and of the Œsophagus removed by operation. The patient was a man, 44 years of age, with a large smooth red tumour at the back of the larynx almost confined to the left side and involving the whole of the ary-epiglottic fold but not encroaching to any extent on the interior of the larynx. There was a very large mass of glands on the left side of the neck so intimately associated with the sterno mastoid that their removal could only be carried out by removing almost the whole of the muscle. The disease

had started ten months previously as a curious catch in speaking. For four months there was a difficulty in swallowing and when first seen by Mr. Butlin the patient could only swallow with pain and the voice had just become husky. The age and immense strength of the patient and the fact of Professor Gluck's successful operations for what would have appeared to be hopeless conditions of malignant disease of the throat and neck induced him to put the matter before the patient who decided in favour of operation. An extremely extensive operation had to be performed, necessitating removal of the whole internal jugular vein, the glands of the neck, and the whole of the sterno-mastoid muscle on that side. The patient made an excellent recovery but within two months the disease had recurred. He had operated on another case of the same sort but within a week the patient died suddenly from profuse hæmorrhage, probably from the carotid. The case was discussed by the President, Sir Felix Semon, and Dr. P. Watson Williams.—Mr. F. C. Shrubsall (for Dr. Percy Kidd) showed a patient suffering from a Tuberculous Outgrowth from the Anterior End of the Left Vocal Cord.—Dr. Dundas Grant showed: (1) A case of Sessile Fibromata at the anterior extremity of the left vocal cord partially removed by means of forceps and completely extirpated by the galvano-cautery; (2) a case of Atrophy and Collapse of the Alæ Nasi treated by means of a Subcutaneous Injection of Paraffin; and (3) Photographs of a case of Flat and Sunken Nose treated by Injections of paraffin. A note of warning was sounded by some speakers as to the dangers that might accrue after the injection of Paraffin.—Mr. Hunter F. Tod showed: (1) A case of Soft Fibroma of the Left Vocal Cord in a woman, aged 31 years; and (2) a case of Sarcoma of the Post nasal Space probably involving the Ethmoidal Region with Enlargement of the Cervical Glands on the Right Side in a man, aged 51 years.—The general expression of opinion was that operation was impracticable.—Dr. Williams showed a man, 42 years of age, with an Intralaryngeal New Growth.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 14th. Dr. Peyton Beale being in the chair.—A discussion on Recent Methods of inducing Anæsthesia was opened by Dr. J. F. Silk who referred to the three stages in the use of anæsthetics, beginning with the elementary stage which lasted until 1890, when the patient dreaded the anæsthetist more than the surgeon; the second stage, during which anæsthetists were divided into the two rival camps of chloroform and ether; and the present stage, when they had recognised definitely that these were not the only anæsthetics and that the true art of the anæsthetist did not lie in pinning his faith to any one anæsthetic but in adapting it to the particular patient. More than this, he could with advantage change the anæsthetic to suit the same patient at different stages of the same operation. Dr. Silk then passed in review the various modern methods of inducing anæsthesia. In dealing with gas and oxygen he spoke very highly of the Patterson face-piece, especially in the case of young children. Gas and air had the disadvantage that so much gas was used, but Dr. Silk recommended the combination for plethoric patients. In the use of ether he referred to Dr. Probyn Williams's improvement of the small Clover inhaler by increasing the air way and showed the inhaler thus modified. For the administration of chloroform the Junker apparatus with glass inhaler was recommended, although Dr. Silk said that he himself always used a simple drop-bottle and an ordinary mask. He used less and less chloroform; when he could not give ether he fell back on a mixture of one part of chloroform and two parts of ether with which he was very pleased. He then passed on to the newer forms of anæsthetics having chloride of ethyl as their basis. As regarded methods of administration Dr. Silk did not believe any new instrument to be necessary. He used chloride of ethyl as a preliminary to other anæsthetics, as a substitute for gas, and for adenoids (alone), but not for dental cases because the period of anæsthesia could not well be continued should this be necessary. The methods of administration were demonstrated. The great advantages of chloride of ethyl were that it was very rapid, not unpleasant, produced no asphyxia, and needed no big apparatus for its use.—Mr. H. E. G. Boyle, resident anæsthetist at St. Bartholomew's Hospital, deprecated all forms of complicated apparatus as these were incumbrances rather than helps to all except very skilled anæsthetists. A mixture of chloroform and ether he considered very useful, especially in cases that were doing badly with either when given alone. Mr. Boyle then referred to somnoform which he had administered between 600 and 700 times. It was an exceedingly useful anæsthetic but it needed familiarity in order to get good results. The use of 2·5 to 3 cubic centimetres, instead of larger doses, was recommended, being given in a closed bag with a face-piece; in this way from 35 to 40 minutes' quiet anæsthesia was obtained. The time to begin operating was when the conjunctival reflex was lost and the breathing was slightly stertorous. The great thing to avoid was admixture with air; if this occurred there was often vomiting, not unless.—Dr. H. H. Rubra, anæsthetist to the Great Northern Central Hospital, concurred with most of Mr. Boyle's remarks concerning somnoform. He had found it very useful in cases where gas could not be taken. He also considered it a better anæsthetic than ethyl chloride, giving less spasm and more perfect analgesia. It had the advantage of not being unpleasant.—Several other members took part in the discussion.

MEDICAL SOCIETY OF LONDON.—A meeting of this society was held on Jan. 25th, Dr. F. de Havilland Hall, the President, being in the chair.—Dr. M. Handfield-Jones opened a discussion on Pelvic Lesions in Relation to Abdominal Diagnosis. The subject, he remarked, was beset with difficulties because the connexion between uterine disease and abdominal inflammations was not always clear. Cases were referred to in which severe nausea and vomiting were dependent on metritis and disappeared on the cure of the latter. Three cases were then narrated in which perforating gastric ulcer had been diagnosed but in which the symptoms really depended on hæmorrhage from rupture of a tubal gestation. The menstrual history in such cases was of little value, nor did pelvic examination lend much aid; the pain might be very diffuse and the effect on the temperature and pulse might be the same in both conditions. Exploratory laparotomy was the only proper course. Cases were next mentioned to illustrate the difficulty of diagnosis of abdominal inflammations and other conditions from those depending on dermoid cyst of the ovary, suppurating cysts of the ovary, and fibro-myoma of the uterus. The pelvic organs should always be examined in suspected abdominal disease. Cases illustrating the part played by pelvic adhesions in producing abdominal symptoms were narrated. Constipation and nausea might be due to adhesions or to bands which might be very easily overlooked, and a case was mentioned which had been operated on by different highly skilled surgeons on six occasions without obtaining relief.—Mr. Alban H. G. Doran dwelt on the necessity of following up the after-history of operation cases because reported recoveries were not always real recoveries. He referred to a case of severe dysmenorrhœa in which it was proposed to remove the ovaries but the symptoms were relieved by the patient wearing spectacles suitable for the correction of her hypermetropia.—Dr. Heywood Smith, referring to the diagnosis between ruptured tubal pregnancy and perforated gastric ulcer, remarked that the mammary symptoms were very valuable.—Dr. J. Vincent Bell (Rochester) narrated a case of parovarian cyst which resembled a tumour of abdominal origin.—Mr. Edmund Owen remarked on the value of exploratory operations and said that it was a very remarkable fact that patients recovered after mere opening of the abdomen. He referred to the value of a discharge of blackish blood from the vagina as a diagnostic feature of tubal pregnancy.—The President mentioned the case of a girl aged 12 years whose symptoms suggested appendicitis but were found to be due to a strangulated ovarian cyst.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—The annual meeting of this society was held at the Owens College, Manchester, on Jan. 15th.—Dr. W. J. Sinclair (Manchester) was unanimously elected president of the society for 1904. At the conclusion of the annual business Dr. A. Stookes (Liverpool) read notes of a case of Eclampsia with fatal result.—A discussion followed in which the President, Dr. H. Briggs, Dr. Martin, Dr. Croft, Dr. Nesfield, and Dr. J. E. Garner took part.—Dr. A. Donald (Manchester) read a paper on Chronic Endometritis and Chronic Metritis in Virgins. He dealt with affections of the endometrium and mesometrium occurring apart from the usual infective causes (sepsis, gonorrhœa, &c.). The paper was based on a series of 40 cases which had been carefully observed. Attention was specially directed to one group of cases which were characterised by the association

of these three conditions: (1) small or infantile cervix; (2) acute flexion, forwards or backwards; and (3) enlargement of the uterine body. The symptoms in these cases were in the order of frequency: (1) pain or dragging sensation in one or both iliac regions, or pain generally in the lower zone of the abdomen (in 36 out of 40 cases); (2) dysmenorrhœa (in 33 out of 40 cases); (3) leucorrhœa (in 31 out of 40 cases); (4) menorrhagia or metrorrhagia (in 16 out of 40 cases); and (5) remote or nervous symptoms. In a large proportion of the cases the uterine mucosa was much thickened. The uterine cavity showed an increase in length of from a quarter of an inch to one and three-quarter inches and the mesometrium was sometimes considerably thickened. Microscopic examination of the mucous membrane removed showed great increase in glands or in interglandular stroma or both. Remarks were made as to the etiology and treatment of the condition.—The paper was discussed by Dr. D. Lloyd Roberts, Dr. Arnold W. W. Lea, Dr. W. E. Fothergill, Dr. Stookes, Dr. Richardson, and the President.—Dr. Donald replied.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 14th, Dr. J. Theodore Cash, the President, being in the chair.—The following clinical cases were shown: Dr. H. M. W. Gray (for Dr. J. Mackenzie Booth): A case of Double Undescended Testes in which reposition had been effected by Annandale's method.—Dr. J. F. Christie: A woman suffering from a Chronic Diffuse Infiltration of the Skin of the whole Body with Formation of "Tubercles" on the Face. The case had been diagnosed two years before at the Dermatological Society of London as lymphodermia perniciosa.—Dr. G. M. Edmond: (1) A case of Disseminated Sclerosis; (2) a case of Functional Paraplegia; and (3) a case probably of Cerebellar Tumour.—Dr. Gray: A case of Tendon Transplantation for Musculo-spiral Paralysis. The flexor carpi ulnaris tendon was cut, brought through the interosseous membrane, and attached to the extensor tendons. Marked improvement in extension of fingers and in supination followed.—Dr. R. G. McKerron: A case of Leucocythæmia of the spleno-medullary type in a boy, aged 12 years. 48 per cent. of myelocytes were present.—Dr. J. Marnoch: (1) A case in which Suprapubic Prostatectomy had been performed with complete success for prostatic hypertrophy; (2) a case of Non-malignant Pyloric Stenosis with a considerable tumour at the pyloric region in which posterior gastro-enterostomy had given complete relief to the symptoms; (3) a case of Perforated Gastric Ulcer in which operation had been performed within five hours of the perforation; and (4) a child, aged three years, operated on ten months before for Tuberculous Peritonitis; the abdomen had been simply opened, not drained. The child now appeared quite well.—Dr. G. Rose: (1) Two cases after Disarticulation at the Hip-joint by McBurney's Method; and (2) a case after Excision of a Large Spina Bifida Tumour at the age of one month.

CLINICAL SOCIETY OF MANCHESTER.—The monthly meeting of this society was held on Jan. 19th, Dr. W. Milligan, the President, being in the chair. Dr. Eugene S. Yonge showed new Self-retaining Basins for Nasal and Aural Work; also a new apparatus for demonstrating the Laryngeal Image and Intralaryngeal Manipulations. By this apparatus (invented by Professor Meyer of Berlin) a beautiful image of the larynx could be obtained by five observers at a time, including, of course, the examiner. Also, intralaryngeal manipulations were as clearly observed by the bystanders as by the operator. It appeared, so far as Dr. Yonge knew, to be the best apparatus extant for the purposes indicated.—Dr. G. H. Lancashire read a paper on Some Specific and Tuberculous Affections of the Face. The various syphilitic manifestations commonly met with in this region were discussed and clinical features were described which served to differentiate them from other skin diseases. Tertiary syphilitic disease was dealt with at greater length and especial mention was made of those cases simulating lupus vulgaris and *vice versâ*. In all doubtful cases the adoption of a preliminary antisyphilitic treatment was urged and the danger of immediate surgical procedure in these cases was emphasised. Finally, attention was drawn to that small group of cases in which both syphilis and lupus were combined in the same lesions. Photographs, plates, and cases were shown illustrating the paper.

ROYAL MEDICAL SOCIETY OF EDINBURGH.—A meeting of this society was held on Jan. 15th, Dr. C. J. Shaw being in the chair.—Dr. J. Murdoch Brown read a dissertation on Cyanosis.—Dr. A. C. Geddes read notes of the case of a boy admitted to hospital suffering from a peculiar linear burn, of the second degree, on the right side of the thorax. The burn was treated as usual with picric acid. During the night following admission the patient passed into a state of extreme collapse with a pulse of over 200 and marked Cheyne-Stokes respiration. The interest of the case lay in the fact that while in this condition a peculiar cyclical change was noticed in the boy's colour. Thus, beginning with deadly pallor, his face would gradually assume a more healthy hue, from which it passed on to flushing and then deep cyanosis, and back again to pallor. This cycle took about four minutes to pass through, while the Cheyne-Stokes respiratory cycle only occupied from 60 to 80 seconds. So far as was known this condition had not been previously described.—Dr. G. J. Farie read notes on a case of Submucous Fibroid of the Cervix Uteri. The tumour caused profuse hæmorrhage and was removed by panhysterectomy. In the specimen which Dr. Farie showed there was a remarkable enlargement of the cervix by the tumour—the uterus, which was of normal size, being only about one-quarter the length of the cervix.

PLAISTOW AND CANNING TOWN MEDICAL SOCIETY.—The fifth annual meeting of this society was held on Jan. 21st, Mr. Percy Rose being in the chair. The annual report was read and passed.—Mr. J. Jordan Harvey showed specimens of (1) Placenta Circumvallata; and (2) Placenta Succenturiata.—Dr. E. Hay exhibited a case of Dilatation of the Stomach.—The following gentlemen were elected office bearers for the year:—President: Dr. W. C. Taylor. Vice-President: Mr. Harvey. Honorary treasurer: Dr. W. M. D. Gallie. Honorary secretaries: Dr. Hay and Dr. E. P. McLoughlin.—Mr. Rose opened a discussion on the Responsibilities that might be thrown on Medical Men under the Midwives Act and the Absence of any Provision for securing Payment. He was of opinion that the payment of those fees should be undertaken by the local supervising authority and concluded by submitting a scale of fees.—A discussion ensued in which the majority of those present joined and generally agreed with the scheme proposed. It was decided to approach the local supervising authority on the matter.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Jan. 20th, Dr. E. S. Reynolds, the President, being in the chair.—Mr. J. Collier exhibited specimens of (1) Chondro-Sarcoma of the Os Calcis and (2) Pancreatic Cysts.—Dr. E. S. Yonge made a communication on the Recurrence of Nasal Polypi, with special reference to the theory of bone disease.—Mr. Smith mentioned a case of Non-traumatic Rupture of the Bladder and showed the specimen.—Mr. John B. Wolstenholme exhibited the Cervical Vertebræ of an old male horse affected with osteomalacia associated with periostitis, in which spontaneous fracture of a process of the sixth and of the seventh had occurred. He also exhibited mounted specimens of the Sarcoptes Scabiei, variety Equinus, together with a section of skin showing galleries with acari, &c., therein.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Jan. 22nd, Dr. Leslie Durno, the President, being in the chair.—Mr. W. Campbell M'Donnell showed a man, aged 34 years, at whose Cardiac Apex was heard a Systolic Noise audible only during inspiration.—Dr. Alexander Morison read a paper on the Efficient Treatment of Cardiac Failure, which will be found in full at p. 291 of our present issue. A general discussion followed to which Dr. Morison replied.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of this society was held on Jan. 13th, Mr. Christopher Heath, the President, being in the chair. Three new members were elected and the death of a member was reported. There were no fresh applications for grants. It was resolved to distribute £1513 among the 53 widows, 15 orphans, and four recipients from the Copeland Fund now in receipt of grants. A sum of £586 had been given at Christmas as a present, £10 each to 53 widows, £3 each to 12 orphans, and £5 each to the four orphans on the Copeland Fund. The expenses of the quarter were £77 12*s.* 6*d.*

Reviews and Notices of Books.

A Manual of Medicine. Edited by W. H. ALLCHIN, M.D., F.R.C.P. Lond., F.R.S. Edin., Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital, Examiner in Medicine, Naval Medical Service. Vol. V., Diseases of the Abdominal Organs. London: Macmillan and Co., Limited. 1903. Pp. 687. Price 10*s.*

THIS volume is a comprehensive one and contains articles on diseases of the digestive system and of the liver; on diseases of the peritoneum and of the vessels of the abdomen; on diseases of the kidneys; and on diseases of the ductless glands.

The digestive organs are first discussed. The general anatomy and physiology of these organs are admirably described by Dr. Allchin and then follows a well-written disquisition on Food and Diet by Dr. R. Hutchison. His remarks on the digestibility and absorbability of foods are worthy of close attention. He shows that the physical form of a food has more influence upon the ease with which it is digested than any other consideration. Fineness of division greatly facilitates solution in the stomach. On the other hand, all tough and hard articles of diet are dissolved with difficulty, while the presence of much fat in the interstices of a food militates against rapid disintegration by preventing the ready ingress of gastric juice. The quantity of any article eaten has less influence on its digestibility than its consistence. Doubling the quantity, for instance, does not mean doubling the time required for digestion but only prolonging it by about one half. Dr. Hutchison further draws attention to the influence which certain accompaniments of meals have upon the rate of digestion. He states that water is almost devoid of any influence unless the amount taken is excessive; hot water even accelerates digestion. Tea and coffee delay it, both in the mouth and the stomach, but alcoholic drinks have "astonishingly little effect" and, so far as the stomach at least is concerned, may even accelerate the process by promoting a flow of gastric juice.

Equally interesting are the observations of Dr. W. S. Lazarus-Barlow on the Bacteria of the Alimentary Tract. He points out that the experiments of Schottelius tend to show that the enzymes are incapable of exerting their full power until aided by the bacteria which appear normally in the excreta in thirty-six hours after birth; therefore it would seem that the organisms found in the alimentary canal are of service to the economy of their host. Dr. Lazarus-Barlow considers that it is certain that the bacteria in many instances assist in the breaking down of proteid matter but whether the less complex substances produced in this way can be, and are, utilised by the body at large for its nutrition appears to be doubtful. It has, however, been shown that in life under completely aseptic conditions the fæces do not contain phenol, cresol, indol, skatol, or pyrocatechin, substances found in the fæces of animals living under ordinary conditions. Dr. Lazarus-Barlow sums up the whole question by saying that "at the present time there is a tendency to believe that although the bacteria in the alimentary tract play an extremely important part in inducing intestinal putrefaction, they only act in this direction and do not produce bodies which are utilised by the body to its advantage."

Diseases of the Mouth, Pharynx and Œsophagus are ably dealt with by Dr. Bertram L. Abrahams and this section contains much information with regard to the diseases which may affect those organs.

The portions of the volume which are devoted to a consideration of the Diseases of the Stomach and Intestines have been written by Dr. Allchin. The observations on etiology and pathology are full and complete, containing the most modern views on those subjects. Then follow some extended remarks on the general symptomatology of gastro-intestinal disease which will well repay perusal. The symptomatology and treatment of the individual diseases affecting these organs are considered seriatim. We question whether it is a good plan to separate causation and pathology so entirely from the clinical aspect of disease as is entailed by the plan thus adopted. If, for instance, a reader wishes to obtain information on "gastric" or "peptic" ulcer he will have to search in three separate sections before he can attain his object. We are of opinion that the old method of considering the various aspects of each malady (etiology, pathology, symptoms, and treatment) under the heading of that particular disease is to be preferred. It is certainly more convenient for reference and less confusing to the student.

The article on the Physical Examination of the Stomach and Intestines and the Analysis of the Gastric Contents is by Dr. Bertrand Dawson and in it are described the modern methods which are employed as aids to diagnosis in gastric and intestinal affections.

The Diseases of the Liver are considered by Dr. R. G. Hebb and Dr. Alexander Crombie. The article on Hepatic Abscess is a particularly interesting one and the etiology is discussed in a most instructive manner. It is shown that although the maximum frequency of this disease corresponds to a zone comprised within the isotherms of 75° and 80° F., yet heat has probably only an accessory influence and the essential cause of the greater seasonal prevalence is the relative prevalence of dysentery at the same seasons, for all hot countries are not equally noted for the occurrence of hepatic abscess. Attention is also drawn to the influence of race. A comparison of the returns of the army of India shows that the mortality from this affection is thirty-two times as great among European as it is among native troops, and this notwithstanding the greater prevalence of dysentery among native soldiers. The influence of age, sex, length of residence in the affected district, alcohol, and chill, and the causal relationship of dysentery and other septic foci in the intestines are also duly commented on.

Dr. W. Hale White writes on Diseases of the Peritoneum. In considering the treatment of tuberculous peritonitis the question as to the performance of laparotomy naturally receives full attention. Dr. Hale White arrives at the conclusion which is now generally held—namely, that the best results are obtained in those cases in which there is a large amount of ascitic fluid free in the peritoneal cavity. It is true, as he points out, that these are just the cases which give the most favourable results when treated without the intervention of the surgeon but on the other hand they are the cases in which the operation is easiest and he therefore urges that as the mortality as a result of the operation is in all cases so low laparotomy should be performed on such cases if circumstances prevent fresh and abundant food from being satisfactorily made use of or if, these having been tried, the progress is slow. We quite agree with him that the cases in which operation is most valuable are those in which there are much ascites and some fibro-caseous change in the peritoneum but in which the adhesions are not numerous or dense enough to prevent the evacuation of the fluid.

Dr. J. H. Bryant contributes a short article on Diseases of the Abdominal Vessels.

Diseases of the Kidneys are considered by Dr. J. Rose Bradford. His observations, though brief, are perhaps the most interesting in the volume. In dealing with the etiology of renal disease he draws attention to the fact that it has long been recognised that certain affections of the kidney, as for example some forms of Bright's disease,

have in many instances a toxic origin, but it is only recently that the view has gained ground that all forms of so-called nephritis and probably every variety of Bright's disease have a similar origin. Dr. Bradford enters into a discussion as to the nature of these toxic substances and we can recommend to our readers a careful study of his remarks. He is a strong supporter of the value of milk in the treatment of chronic Bright's disease and recommends that when uræmic symptoms are present or when dropsy occurs the patient should be put to bed and kept on a rigid milk diet until the urgency of the symptoms has subsided.

The description of the Diseases of the Ductless Glands is divided between Dr. Sidney Coupland and Dr. Abrahams but, as the most important diseases in which these glands are involved have been already dealt with in the earlier volumes of this manual, this article is a short one. It contains, however, valuable information on diseases of the spleen, lymphadenitis, and tuberculosis of the lymphatic glands. Diseases of the thymus gland are also discussed.

Diseases of the Throat and Nose. By CHARLES HUNTOON KNIGHT, M.D., Professor of Laryngology, Cornell University Medical College; Surgeon, Manhattan Eye and Ear Hospital, Throat Department, &c. With 147 Illustrations. London: Rebman, Limited. 1903. Pp. 423. Price 13s.

AFTER a careful perusal of this work we have no hesitation in congratulating Dr. Knight on the results of his labours, for the book is one which commends itself equally to the specialist and to the general practitioner who wish to obtain sound information on the subjects of which it treats. The author's diction is easy and his style is simple and the various conditions which are matter of dispute have the current theories relative to them clearly and lucidly explained. The anatomy and physiology of the nose are briefly but sufficiently dwelt upon and—rightly we think—the physiology of the nose is curtailed and reduced to such statements as are necessary to guide the medical man in his attempts to restore the nasal passages to an approximately normal condition. Dr. Knight next deals with the methods of examination and the instruments necessary for this purpose. This section is, perhaps, too brief and the suggestion that sunlight should be utilised for examination clearly shows that the author has never been subjected to the inconvenience which results from the use of such a powerful illuminant.

The next chapter, which treats of Acute and Chronic Rhinitis, is especially good from the clinical point of view. The pathological histology, however, is not so minutely detailed as was to be expected in a book of this size and description. We next find an account of Atrophic, Membranous, Caseous, and Purulent Rhinitis. Atrophic rhinitis is described as a necessary corollary of pre existing inflammation, one of the few statements with which we are inclined to disagree. If Dr. Knight had perused the admirable paper by Professor Moure, read at the International Congress of Medicine held at Madrid last year, together with the other papers contributed on this subject, we think that he would have recognised that there exist developmental errors in the nasal cavities which are responsible for a proportion of cases of atrophic rhinitis. With this exception, and especially in the treatment of this disease, Dr. Knight's recommendations are most happy. In membranous rhinitis, which is very briefly considered, the impression given is that the pseudo-diphtheritic bacillus is almost invariably present. Caseous rhinitis has sufficient attention devoted to it, a point not usually observed in books of this description. Diseases of the accessory sinuses and their treatment are treated in a way to leave but little room for adverse criticism, though we should have liked to see some reference to the methods of operation adopted by Killian. Especially valuable are the remarks on the sources of error in transillumination. In septal operations Asche's method, where it is suitable, has Dr. Knight's approbation. In nasal polypi we find the pathological standpoint fully investigated. Neoplasms—benign and malignant—specific disorders, epistaxis, and nasal hydrorrhœa receive adequate treatment. In the description of hay fever we notice that Dr. Knight does not mention the serum treatment, which has within the last 12 months been prominently brought before the profession. In Diseases of the Pharynx the adenoid operation is very fully described. There is an excellent, though brief, description of Vincent's angina. The last section is devoted to the Larynx. In the chapter on Anatomy and Physiology the character of the voice is said to be modified by the changes taking place in the vocal cords, the varying size of the glottis being left out of consideration. The methods of examination and the general therapeutics are again rather too briefly considered, for if instruction is needed that instruction should be full. In the account of acute laryngitis we are a little surprised to see that the influence of nasal obstruction is not touched upon. Chronic laryngitis in all its forms is grouped under one heading. Neoplasms, especially benign, receive a very excellent description and here we find that the influence of nasal obstruction used in its widest sense—that is to say, including post-nasal adenoids—is fully recognised as an indirect cause in their development. Malignant disease of the larynx is very carefully described, the subject being brought fully up to date; and tuberculosis of the larynx receives an amount of consideration which is amply justified by the frequency and the importance of the disease. In his otherwise excellent account of the clinical appearances noted in this pathological condition Dr. Knight says that the surrounding parts of an ulcer are pale. This, however, is not usual. Under the heading of treatment it is recommended that the patient should be kept in a uniform temperature, a suggestion which is not entirely borne out by those experienced in the open-air treatment of consumption. In specific disease of the larynx, while all other conditions receive full recognition, stenosis is dealt with in one short sentence. Neuroses, laryngismus stridulus, paralyses, and the presence of foreign bodies receive attention.

This work, admirable in its production, will be of great value to students and practitioners of general medicine and in directing their attention to it we have confidence that they will find it most helpful and instructive.

A Narrative of Medicine in America. By JAMES GREGORY MUMFORD, M.D., Assistant Visiting Surgeon to the Massachusetts General Hospital and Instructor in Surgery in the Harvard Medical School. London and Philadelphia: J. B. Lippincott Company. 1903. Pp. 508.

THIS book, which is dedicated to Professor William Osler, is a narrative dealing with medicine and the medical profession. The author's object has been to take some of the conspicuous American physicians of each era in their proper sequence, to tell the story of their lives and their doings, and thus to illustrate the whole history of medicine in America by a series of pictures. He hopes that the story will show the reader something of the meaning of medicine and of the life of its votaries. The narrative practically ends with the Civil War or about the middle of the last century, as for obvious reasons it has seemed best not to bring it down to the present day. Chapters are, however, added on Ether, on the Founding of the American Medical Association, and on Some Tendencies in Modern Medicine. In the introduction the author briefly glances at the contemporary conditions, political and scientific, in Great Britain, which the early immigrants called "home," to see on what bases English and American medical men of the seventeenth and eighteenth centuries had to build. The age was not a great one for scientific progress, but progress there was, and our profession struggled out of an

Egyptian darkness towards the present light. For the purpose of the narrative the colonial days of America are divided into two eras which correspond roughly with two centuries: the seventeenth century, a time of colonisation, struggle, and privation; and the eighteenth century when towns were being built, when commerce was beginning to thrive, and schools and colleges were appearing in the land. The medical history of the one era is quite distinct from that of the other. To the first belongs the practice, remote and inadequate, of Elizabethan England; to the latter the wider knowledge of American-born men and the early attempts to combine the wisdom and teaching of the Old World with the changed experience of the New.

The book deals not only with the evolution of the medical man but with the inception and development of American hospitals, schools, and universities. In the early history of American science great names are lacking and great events as well, yet in so far as the men of those days stirred up the "Assembly" to pass laws regulating practice they were wise in their generation and did good service. The truth of what Dr. J. S. Billings has said of his country is demonstrated in these pages. In "A Century of American Medicine" he wrote: "We have had, and still have, a very few men who love science for its own sake, whose chief pleasure is in original investigations, and to whom the practice of their profession is mainly, or only, of interest as furnishing material for observation and comparison. ..... Of the highest grade of this class we have thus far produced no specimens: the John Hunter, or Virchow, of the United States has not yet given any sign of existence." Many of the stories told in Dr. Mumford's book are not new but the method of the telling is, we think, just and honest and the author's meaning is conveyed in a way which charms the reader.

Some 30 pages are devoted to the tale of the famous discovery of the anæsthetic properties of ether, America's greatest contribution to medical science in the last century. The words of the venerable Jacob Bigelow uttered at the "Semicentennial of Anæsthesia" bring this section of the book to a most fitting conclusion.

Before finishing this retrospect the author notes the gradual levelling up of the masses of the profession and remarks that the country districts are not being properly furnished with medical men; whereas, on the other hand, in the cities the supply of highly trained practitioners greatly exceeds the demand. The available statistics show that only about one-fifth of the men who have passed through the Harvard school during the years 1892-1901 are pure specialists and that in this conspicuous group of highly trained men there appears no increasing tendency to abandon "general practice." Among the "pleasures of the doctor's life" the author writes of the fascination of work and study, of the ever-present sense of something accomplished, of the stimulation of great responsibility, and of the study of the strength and weakness of humanity—the latter an inexhaustible, fascinating, pathetic, sometimes contemptible, and often terrible field, which makes its votaries either sneering sceptics or, more often we hope, great-hearted philosophers. The last chapter of the book is one which will bring pleasure to any member of the profession who peruses it. Dr. Mumford has given to us a solid contribution towards the history of the profession in the New World.

Milk: its Production and Uses. By EDWARD F. WILLOUGHBY, M.D., D.P.H. Lond. London: Charles Griffin and Co., Limited. 1903. Pp. 259. Price 6*s*.

THERE is no doubt that if every farmer and dairyman knew the ways and means by which milk may become a vehicle or a factor in the spread of disease greater care would be exercised in the clean production of milk and a purer supply would be the outcome. This book aims at being a manual by which information on the points concerning the relationship of milk and disease may be conveyed to the cowkeeper and dairyman. That is a very excellent object and the author has done well to emphasise his intentions. The chapters on breeding, on the management of the cow, and on the construction of cowsheds and dairies give evidence of the author's practical acquaintance with the subject but we think that the sections on milk analysis might have been well left out. It is quite a separate department and one which has little concern for the breeder or keeper. Besides there is a superabundance of handy books on the composition and analysis of milk, on the question of preserving milk, and on bacteriological methods of examination. Chemical analysis has nothing whatever to do with the supply of milk free from disease-producing entities. The author is the inspector of the farms of, and general scientific adviser to, a large dairy company supplying milk to the metropolis and certain suburbs, and the experience which he gains in this capacity must be valuable and should be helpful to those who are anxious to provide a really sanitary milk-supply.

LIBRARY TABLE.

The Causation and Prevention of Malarial Fevers: a Statement of the Results of Researches. Drawn up for the use of Assistant Surgeons, Hospital Assistants, and Students. By Captain S. P. JAMES, M.B. Lond., I.M.S. Issued under the authority of the Director-General of the Indian Medical Service. Second edition. Calcutta: Office of the Superintendent of Government Printing, India. 1903. Pp. 52. Price Rs. 1, or 1*s*. 6*d*.—The first edition of 5000 copies of this pamphlet was, the Director-General of the Indian Medical Service tells us, soon exhausted. In preparing a second edition Captain James has enlarged the scope of the work so as to make it an easy introduction to the study of malaria. We have read this little publication, which is full of pertinent information and excellently illustrated, with both interest and profit and may congratulate Captain James on having performed a very useful work. It is quite what it pretends to be and gives a clear, well-arranged, and capital *résumé* of the subject and may be accepted and used as a scientific and practical guide by those for whom it was designed.

Lehrbuch und Atlas der Zahnheilkunde mit Einschluss der Mundkrankheiten. (*Manual and Atlas of Diseases of the Teeth and Mouth.*) By Dr. Med. GUSTAV PREISWERK. Munich: J. F. Lehmann. 1903. Pp. 352, with 152 Illustrations. Price 14 marks.—This volume includes those special sections of anatomy, physiology, and pathology which have a direct bearing on dental surgery and the author has within the comparatively small space at his disposal succeeded in producing a useful text-book. In the early chapters the anatomy of the teeth and of associated parts is described, the text being accompanied by serviceable illustrations. In the following chapters the various affections of the buccal mucous membrane and the more common tumours affecting the jaws are considered and there is a short, even perhaps too meagre an account of the bacteriology of the mouth. The author might with advantage have extended the account given of abnormalities in position of the teeth and a recently published book might have been expected to contain more up-to-date methods of treatment. In dealing with the pathology of the pulp the classification of Arkövy and Rothmann is adopted. The different affections are clearly described and some excellent illustrations are given. Throughout the book the technique of operative measures is only briefly treated and in some instances the methods advocated are open to adverse criticism.

Précis d'Anatomie Dentaire. By J. CHOQUET. Paris:

F. R. de Rudeval, Éditeur. 1903. Pp. 496, with 195 Illustrations. Price 8 francs.—As a contributor to current dental literature M. J. Choquet is well known to English readers and anything from his able pen is always welcome. The present volume is a most happy effort and should prove useful to students and practitioners of medicine. The opening pages are devoted to a general consideration of the teeth of the animal kingdom and this is followed by the anatomy of the mandible and maxilla. The author brings clearly home to the reader the fact that these bones differ very much in shape in different races and he introduces on p. 32 a most instructive illustration showing the variation in the form of the mandible of individuals of the same age but of different races. Again, in the description of the maxillæ he describes and figures three types of arches—namely, hyperbolic, parabolic, and v-shaped. The importance of a thorough knowledge of the anatomy of the antrum is essential on account of its bearing on the treatment of antral suppuration and we should therefore expect to find a full account of this sinus. M. Choquet has, however, treated the description in barely two pages and only gives two illustrations—one in a human subject and the other in a gorilla. In future editions we hope to find this defect remedied. In the chapter "Rapports des deux Maxillaires" numerous examples of partially edentulous dentures are given and the student is enabled to learn the anatomy of such conditions. The superficial anatomy of the individual teeth is thoroughly described and numerous illustrations are given, but we fail to find a satisfactory account of the shape of the pulp chambers, more especially with regard to their relation to the contours of the teeth. It is true that figures are given showing the distance of the cornua of the pulp from the mesal and distal angles of the teeth at different ages but these are of little value. In the description of the enamel reference is made to the chemical composition, the analyses of von Bibra being followed. These give 3·59 per cent. of organic matter in the enamel of man and a larger quantity in that of woman. Mr. C. S. Tomes's researches on the point seem to have escaped the notice of the author. This investigator has shown that the enamel is practically devoid of organic matter and that the constituent usually taken as such is in reality water of crystallisation, while in the dentine a large part of the matter previously considered organic is also water of crystallisation. The chapter on the calcification of the teeth is good and descriptions are given of dentures in children of two, four, five, and seven years of age. The figures given of the dates of eruption are in accord with those usually considered as correct in this country but it is quite possible that different races may produce different data. The value of the book would be enhanced if the micrographic illustrations were better; the fault seems to lie in defective photography rather than in the production of the "process blocks."

A Pocket Dictionary of Hygiene. By C. T. KINGZETT, F.I.C., and D. HOMFRAY, B.Sc. Second edition. London: Baillière, Tindall, and Cox. 1904. Pp. 112. Price 2*s.* 6*d.*—This little book—it measures four and three-quarter inches by three inches—is certainly handy for the pocket, and the chemical and hygienic information is accurate and useful, but in places the medical information is, to put it mildly, misleading. Thus, under the word "Measles" we are told that the mortality is usually low, although occasionally there is an outbreak in which it runs up to 40 per cent. This statement is insufficient. Again, under the word "Hæmorrhage" the following passage occurs which to our minds is hopelessly confusing: "When an important blood vessel in the arm or leg has been ruptured the best way to prevent violent hæmorrhage ..... is to hold the limb up and bind it round as tightly as possible just above the rupture." No distinction is made here between arterial and venous hæmorrhage and the uninstructed person, we should say, on reading these directions would in the case of a wounded artery apply the bandage in exactly the wrong place. Again, under the word "Poisons" emetics are recommended in the case of alkalies, a course which might prove fatal in a patient who had taken a corrosive alkali. Before a third edition comes out we recommend the authors to have the medical portions of their dictionary revised.

The Insurance Blue-book and Guide, 1903–04. London: Dawbarn and Ward. 1903. Pp. 459. Price 2*s.* net.—This handy publication contains an immense amount of information concerning insurance. Amongst other items are a directory of insurance offices, tables of mortality and expectation of life, the accounts of nearly all insurance offices, a chapter on the legal aspects of insurance, and instructions for obtaining probate or letters of administration. The book is well arranged and clearly printed.

A Few Facts and Figures concerning Vaccination and the Fallacies of Antivaccinators. By J. HEDLEY MARSH, M.R.C.S. Eng., L.R.C.P. Lond. Macclesfield: Claye, Brown, and Claye. 1903. Pp. 56.—This pamphlet is a reprint of letters contributed to the columns of the *Macclesfield Courier* during October and November, 1903. They were written by Mr. Marsh to controvert the statements made by Mr. Harold Whiston, an antivaccinationist, in a lecture delivered in a dissenting chapel, and other statements made by other antivaccinationists in the columns of the *Courier*. The antivaccinationist, however, is like the deaf adder of scripture; he will not hear. Mr. Marsh's array of facts should convince anyone but they will not convince antivaccinationists.

New Inventions.

A TROPICAL CLINICAL THERMOMETER.

IT frequently happens that a surgeon in the Gambian Protectorate has to take the temperature of a patient when the atmospheric temperature is greater than that of the patient. For example, from May 1st to June 19th, 1902, out of the 50 days in 26 days (say 50 per cent.) the temperature in the shade from noon to 3 P.M. was above that of normal blood heat. During ten of those days it was over 100° F. and on three occasions it reached 105°. Now given an atmospheric temperature of, say, 104° and a patient with a temperature of, say, 101°, the question arises, How is one to record it with an ordinary clinical thermometer? which is of course registering 104°, the atmospheric temperature, and cannot be shaken down below that. For this purpose Mr. F. Darton, manufacturing optician, of 142, St. John-street, Clerkenwell, London, E.C., has made at my suggestion a tropical clinical thermometer having the following points: (1) a shaft six inches long; (2) an open scale; (3) non-prismatic; (4) no stricture or bend to prevent the mercury running down; (5) a large calibre tube; and (6) a vacuum bulb at the distal end to take up 4° or 5° of expansion. The advantages of this thermometer are: (1) it can be read in the patient's mouth or axilla without removal; (2) open scale for the same purpose; (3) non-prismatic so as to be read at any angle it may have turned towards you; (4) no stricture or bend (this practically makes it a minimum thermometer, so that when taken from an atmosphere standing at, say, 104° the mercury will drop to the cooler temperature of the patient at, say, 101°); (5) the large calibre of the tube facilitates this; and (6) the vacuum bulb at the distal end to take up 4° or 5° of expansion is to prevent bursting. Government travelling commissioners have reported to me that their ordinary clinical thermometers have sometimes burst, owing to (as occasionally happens) the temperature rising to 110° and over. This thermometer will be suitable to all high tropical temperatures. It will be equally suitable in temperate climates and as it requires no shaking down it would save time in a hospital ward, rising and falling to each patient's

temperature. The six-inch shaft is more suitable for reading axillary temperatures *in situ* but a four inch shaft can also be had.

F. A. BALDWIN, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A.,
Protectorate Surgeon, McCarthy's Island, Gambia, West Africa.

ENTROPIUM FORCEPS.

AT my suggestion Messrs. Arnold and Sons have constructed a pair of entropium forceps as figured in the accompanying illustration. It will be noticed that they are larger than the old-fashioned instrument and that they are fixed by a rack instead of a screw. This facilitates their application and enables an assistant to hold them in position more easily. The fenestrated blade is made to fit into a groove round the flattened blade and the

latter is made slightly convex so that it will force the tissues above the level of the fenestrated edge and save the scalpel coming in contact with it. In order that cleaning may be more thoroughly performed they are made with a detachable joint and the groove for the reception of the fenestrated blade is concave instead of angular. Anyone who has used the old-fashioned instrument must have experienced some of the difficulties I have indicated and as the removal of a tarsal cyst is an operation which many members of the profession undertake I hope that this modification may be of use.

I am indebted to Messrs. Arnold for the careful manner in which they have carried out my idea.

J. LIONEL STRETTON,
Senior Surgeon, Kidderminster Infirmary and Children's Hospital.

A HEALTH TENT.

Messrs. S. Wilson and Co., of Bedford-street, Belfast, have sent us an illustrated description of their "patent health tent," in which there are no poles visible when the tent is erected and an air space six inches wide is provided between the inner and outer layers of canvas for the purposes of reducing variations of temperature. A centre pole is not used. A special feature of the tent is stated to be the employment of stretchers and of cross-stays connecting the vertical poles together in such a manner as to be adjustable lengthwise. These stretchers are, in fact, strong spiral springs and in this way the canvas is firmly held both in wet weather and in dry. The makers believe that the tent will be found useful in the open-air treatment of tuberculosis and in the isolation of cases of infectious disease.

ST. BARTHOLOMEW'S HOSPITAL.

A MEETING convened by the Lord Mayor was held at the Mansion House on Jan. 26th in furtherance of the appeal for funds for St. Bartholomew's Hospital for the erection of new buildings.

The LORD MAYOR, who presided, called upon Sir Trevor Lawrence, the treasurer of St. Bartholomew's Hospital, to make a statement to the meeting.

Sir TREVOR LAWRENCE said that he was authorised to state that the rebuilding appeal had the sanction and sympathy of the Prince of Wales, who was president of the hospital. The question of the site of the hospital had been dealt with by the Mansion House Committee and that committee had decided in favour of the retention of the hospital on its present site. One of the witnesses before the committee was the Chief of the City of London Police and he stated that of all the accidents and cases of sudden illness occurring in the City 65 per cent. were taken to St. Bartholomew's Hospital. Sir Trevor Lawrence then read the following passage from the *Times* of Jan. 16th:—

> The maintenance without shrinkage of the maternity department, strongly contrasting with the diminution of the same department at King's College, shows that the square mile around St. Bartholomew's still contains a large resident poor population, and in all London, perhaps excepting that of the docks, there is probably no locality more fruitful of accidents than Smithfield. The vicinity of eight railway termini to which passengers in thousands come daily, not only from every part of the suburbs but also from almost every part of the midland and northern counties, is an equally important consideration. As with Rome, so all roads lead to St. Bartholomew's, and its removal even to a suburb would place serious difficulties in the way not only of the thousands of patients who now flock to it from all parts of the kingdom but also in the way of the many poor who now visit their relatives within the wards, and to whom omnibus or tram fares would frequently be prohibitive. The absence of these people would not be regretted by the doctors or nurses but would, sometimes at least, be a serious trouble to the sick.

In regard to the scheme involving partial removal of the hospital Sir Trevor Lawrence said that it seemed to him a most undesirable suggestion, because it would cause great difficulty in the treatment of patients and would destroy the medical school, the maintenance of which was a matter of the utmost importance. The value of the site in his opinion had been very largely and very seriously exaggerated. In the opinion of experienced valuers the price was much less than had been estimated by the advocates for the removal of the hospital. He contended that the mere question of the value of a site did not comprise the whole problem. Money considerations should not be put before the interests of a great institution carrying on a work of mercy and charity. It had further to be remembered that the majority of the patients were too poor to afford the money or time to go to a distant hospital in the suburbs. Referring to the population shown by the last census in the proximity of the hospital, he pointed out that the census was taken on a Sunday night and the great number of people who worked in the neighbourhood during the day-time were not taken into account. During the last 50 years no fewer than 7,000,000 patients had been treated at the hospital and in the out-patients' department during the first three weeks of this year the number of attendances had been 15,247. Dealing with the question of the proposed new buildings Sir Trevor Lawrence said that the wards were somewhat antiquated and immediate attention was required in certain departments, the most pressing need being first a new casualty and out-patients' department with separate accommodation for ophthalmic, orthopædic, skin, throat, ear, electrical, dental, and gynæcological cases. A home for 240 nurses and 80 female servants was wanted. Sir Trevor Lawrence concluded by giving a list of the new buildings required for which a sum of £438,000 would have to be found.

The BISHOP of LONDON then moved the following:—

> That this meeting, having heard the statement of the treasurer of St. Bartholomew's Hospital, cordially approves of the decision of the governors to reconstruct the hospital on its ancient City site, extended as it has recently been by the addition of one and a half acres.

He said that the appeal made that day was made by the pioneer hospital of the whole country which had done splendid work in the cause of humanity for 800 years. In all parts of the world there were many men who ought to send a contribution to the rebuilding fund. What they wanted was the best hospital that could be turned out for the City of London and he pleaded earnestly that the generosity of the citizens of London should give St. Bartholomew's what was required.

Sir WILLIAM CHURCH, in seconding the motion, said he

had spent 40 years at St. Bartholomew's Hospital and during that time many great improvements had been made by the governors of the hospital in the wards and in the service of the institution. Want of space had alone prevented structural changes being carried out adequate to the ever-growing importance of the work done in the casualty, out-patient, and other departments of the hospital. St. Bartholomew's Hospital had recently had the opportunity of extending its borders and could appeal with confidence to the City of London and to the public for the necessary help to improve the condition under which it had so long been labouring. They had heard certain objections raised in regard to the appeal being placed before the meeting without any detailed plans of the rebuilding having been furnished. In his opinion such objections could not be seriously advanced. Surely they could trust the governing body of the hospital and the medical staff to see that in providing for present wants nothing would be done that would in any way hamper the future reconstruction of the hospital. It had been argued that St. Bartholomew's Hospital should be moved because its site was a veritable gold mine, but the value of that site could not be known until it was put on the market for sale. There was the further consideration that towards that site every day there was an influx of from 30,000 to 40,000 workers to premises in the closest proximity to the hospital and they knew that accidents and sudden illnesses occurred during the working hours of the day more often than when people were sitting comfortably at home. They had been told that 65 per cent. of the accidents in cases of sudden illness in the City were sent to St. Bartholomew's Hospital and that number would be increased by the removal of King's College Hospital. Continuing, Sir William Church said that he particularly desired to remove an impression that had arisen from injurious and misinformed statements that the present wards were so out of date as to be prejudicial to the health of the patients. That, he assured them, might be dismissed from their minds entirely, for the results obtained by the medical staff were as favourable as those shown by the most up-to-date hospitals. He considered that the removal of the hospital to another site would destroy the medical school and he reminded them that if a medical school was not attached to a large hospital there must be a large increase in the expenses of the treatment of patients. There was the further point that the absence of the medical school would remove that beneficial rivalry with other schools of medicine in attaining the best possible treatment for the relief of suffering and pain. They were not ungrateful to the City of London for the help that had been afforded to the hospital when the present wards were erected some 150 years ago, and they confidently looked to the City of London and the public to come to their aid again so that St. Bartholomew's Hospital might remain in the future, as it had been in the past, one of the great centres of the kingdom for the relief of pain, for the acquirement of medical knowledge, and for the advancement of medicine and surgery.

Mr. JOHN TWEEDY, President of the Royal College of Surgeons of England, in supporting the motion, said that he was one of those who was disposed at first to consider favourably the proposal for the removal of the hospital to another site, but after reading the report of the Mansion House Committee he had altered his views. He pointed out that in addition to the arguments put forward there was much to be said for the maintenance of the historical tradition of the hospital and the satisfaction of historical sentiment. He asked them, What would New York not give to have within its boundaries an institution that for nearly 800 consecutive years had been carrying on one of the noblest works of charity? What would any city in any part of the civilised world not give to possess a site hallowed by its associations with Harvey and a hospital made memorable as a school in which John Hunter received his surgical education? He felt certain that the City of London would not allow these sentiments to pass by unheeded.

Dr. S. J. GEE, speaking on behalf of the medical staff, described the active growth which was taking place in all departments of the hospital and contrasted the number of the staff in 1868 with the number of the staff at the present day. He also urged that the removal of the hospital would be an unwise proceeding.

The LORD MAYOR then put the motion to the meeting when it was passed unanimously.

The next motion was proposed by Mr. ALBAN GIBBS, M.P., and was as follows:—

That this meeting pledges itself to support the governors of St. Bartholomew's Hospital in their appeal for the funds necessary for the reconstruction of the hospital and earnestly commends to the generosity of the public this the first appeal which the hospital has made for 150 years.

This was seconded by the MASTER of the Mercers' Company who promised that the appeal would be considered in a liberal spirit by the court of his Company.

The CHIEF RABBI also supported the motion and described how in visiting his own poor in the wards of St. Bartholomew's he was greatly struck by the kindness and consideration with which they were treated.

Sir WILLIAM HART-DYKE, M.P., also supported the motion and was followed by Mr. A. A. BOWLBY, who said that he addressed the meeting in order to emphasise the fact that the staff of the hospital were absolutely unanimous in supporting the present proposal. Dr. Gee had spoken for the medical side and what he said was equally true for the surgical side. The difficulty was the want of space in which to do the work.

Upon this motion being put to the meeting by the LORD MAYOR it was declared carried with two dissentients.

After Sir WILLIAM TRELOAR had made the announcement that the sum of £40,000 had been received in cheques and promises towards the fund, a vote of thanks to the Lord Mayor for presiding was proposed by the MASTER of the Merchant Taylors' Company seconded by the Rev. R. J. CAMPBELL, supported by a speech from Mr. J. LANGTON and carried with acclamation.

The LORD MAYOR briefly responded and the proceedings then came to an end.

Looking Back.

FROM

THE LANCET, *SATURDAY*, JAN. 28, 1826.

Yellow Fever.

While the medical world continues to be disturbed by that irreconcileable subject—that *bugbear* to the profession—Contagion, it is with no little pleasure that we lay before our readers the Report of the French Academy of Sciences on this hacknied question. The cool and dispassionate manner in which it has been investigated does credit to the members, and is well calculated to conciliate the absurdities of the *Ayes* and the follies of *Noes*.

M. Dupuytren read a report on the memoir of MM. Lassis, Costa, and Lasserre, relative to yellow fever, and some new experiments on the contagious nature of the malady. He commenced by showing the opposite opinions entertained as to the way in which yellow fever, as an epidemic, is thought to be propagated.

"In the theory of contagion," observed M. Dupuytren, "it is allowed that the malady, carried to its height, is capable of giving rise to a *miasm*, a sickly principle, a true germ, which escapes from the bodies of the sick, and preserves the power of reproducing the malady, with all its concomitant symptoms."

"In the theory of infection, on the contrary, it is contended that the malady can never propagate itself but under the influence of causes which are capable of producing it primarily, as heat and moisture, impure air, putrid exhalations, in places where the air cannot renew itself easily; these are considered as causes always indispensable for the reproduction of yellow fever."

"If the germ, or *effluvium* of the contagionists," continued M. Dupuytren, "really exists, that man will be rendering an incalculable service to mankind who will, in a clear way, point out the mode by which we can assure ourselves of its presence."

"It is not necessary to say, that in accordance with the idea which they form of the malady, diametrically opposite measures are called for to prevent the propagation of its ravages; sequestration effected by every sort of means, sanitary cordons, and lazarettoes, are a consequence of the theory of contagion, whilst the dispersion of the sick ought to be directed by the exclusive partisans of infection."

M. Dupuytren concluded these general remarks by observing, that if the theory of infection appeared more simple and seducing, since it admits but of one cause, that of contagion seems better calculated for the explanation of detailed facts.

THE LANCET.

LONDON: SATURDAY, JANUARY 30, 1904.

New Facts concerning Malignant Growths.

EVERY new fact relating to the vital processes of malignant growths is sure of receiving a hearty welcome from all, even though at first sight there may seem to be no very close connexion between the new fact observed and the etiology and treatment of cancer. But the more we know of malignant growths the more likely are we to arrive at exact ideas as to their causation and a rational system of therapeutics. Within the last few weeks two papers of great value in the study of malignant growths have been read before the Royal Society of London, and, though opinions may differ as to the exact bearing of the facts communicated, there cannot be any doubt of the importance of the observations recorded. The first of these papers was read on Dec. 10th of last year and was written by Professor J. B. FARMER, F.R.S., Mr. J. E. S. MOORE, and Mr. C. E. WALKER. It was a record of a large number of careful observations on the intranuclear changes occurring in those cells of malignant growths which are undergoing multiplication. It was entitled "Resemblances exhibited between the Cells of Malignant Growths in Man and those of Normal Reproductive Tissues." It is unnecessary to go with more detail into the paper in question, as a full abstract was published in our columns,[1] while a discussion of the mitotic changes which occur in the division of a nucleus of an ordinary somatic cell would be quite outside the scope of this article. Suffice it to say that the phenomena in all somatic cells are alike, but that in the cells which are developing into ovaries or testes the mitotic changes are strikingly different, forming the so-called "heterotype mitosis." Now Professor FARMER and his collaborators—and the work was genuine collaboration—showed that in malignant growths the mode in which division of the nucleus is effected differs from that exhibited by somatic cells and resembles very closely that found in developing reproductive tissue. That is to say, there is heterotype mitosis in malignant growths. Benign growths show homotype mitosis, as is found in ordinary somatic cells, and the difference, now scientifically recorded, may obviously be of value in diagnosing between a simple and a malignant growth. It is curious to find that an approach to the idea that there was some relation between the activity of malignant growths and "germinal epithelium" was made several years ago. In 1896 Dr. G. T. BEATSON read a paper before the Edinburgh Medico-Chirurgical Society in which he suggested that "cancer consists in the epithelium of the part affected taking on the active proliferation which is a marked characteristic of the germinal epithelium" and that "there seems a reasonable ground for thinking that the active processes seen in a cancerous tumour are best explained by regarding the epithelium of the part as having taken on the properties and the powers of the germinal epithelium." As the outcome of this theory Dr. BEATSON performed on several patients with inoperable malignant disease the operation of double oöphorectomy. In a certain proportion of the cases great improvement followed, and in some apparent recovery. Varying results have been obtained by different operators who have applied this method of treatment in such desperate cases, and on the whole the opinion exists that in some cases of cancer the removal of the ovaries does exert a favourable influence. Without pressing unduly the similarity between the views of Dr. BEATSON and those set forth in the paper read at the Royal Society we draw attention to the resemblance as interesting and noteworthy. Dr. BEATSON'S letter on this subject will be found in our issue of Jan. 2nd and the reply of Professor FARMER and his colleagues appeared a fortnight later.

A second paper of equal importance to medical readers on the pathology of cancer was read at the Royal Society on Jan. 21st for the authors, Dr. E. F BASHFORD and Dr. J. A. MURRAY. Dr. BASHFORD is the general superintendent and director of the central laboratory of the Cancer Research Fund of the Royal College of Physicians of London and the Royal College of Surgeons of England, and this paper, among the first-fruits of that research, will shortly appear at full length in our columns. Upon several important points in this paper we may dwell in a few preliminary words. In dealing with the significance of the zoological distribution of cancer and the nature of the mitoses Dr. BASHFORD and Dr. MURRAY apply to the new growths met with among the lower animals the rule laid down by Professor FARMER, Mr. MOORE, and Mr. WALKER with regard to man. A large number of malignant tumours have been examined and tumours from the trout, the mouse, and the dog all showed the character in the mitoses seen in reproductive cells. Thus a complicated sequence of cell changes has been found to be characteristic of carcinoma and sarcoma alike, and this sequence is the same as that which initiates the origin of the sexual generation in plants from the asexual, and is terminal in the history of the sexual cells in animals. Dr. BASHFORD and Dr. MURRAY have found that the malignant growths occurring in domesticated animals and other vertebrates are identical with those found in man, clinically, pathologically, anatomically, and microscopically. Moreover, since the malignant new growths occur in animals under the greatest diversity of habitat, food, and general conditions of life, Dr. BASHFORD and Dr. MURRAY hold that such external conditions can have but a subsidiary rôle in determining the incidence of the disease, and from this it is concluded that the essential factors must be sought in the potentialities which reside in the cells constituting the living body. A third point brought out in this highly valuable and suggestive contribution to pathological study dealt with the histological changes seen after an attempt to transfer a malignant tumour from one animal to another of the same species. It was found that the new tumour, which arises from the implantation of a portion of a tumour

[1] THE LANCET, Dec. 26th, 1903, p. 1830.

from another animal, springs from the actual cells introduced and not from the part into which the portion of tumour was implanted. Dr. BASHFORD and Dr. MURRAY conclude from their researches that "cancer is an irregular and localised manifestation of a process otherwise natural to the life-cycle of all organisms." We may be sure that the work of Dr. BASHFORD and Dr. MURRAY will receive the closest attention from all pathologists and biologists, for the significance of such a conclusion, as dictating the direction of future research work, is immense.

The public, who have read extracts in the daily press from the two papers under consideration, have imagined that we are now measurably nearer a knowledge of the etiology and treatment of malignant disease. Unfortunately this is not so. A direction, apparently of a most valuable kind, for future investigation has been provided. As to the importance of the observations there can be no question, but the conclusions that we may safely draw from the excellent work that has been done would seem to the lay mind rather meagre. Let us review what fresh data we have obtained. We have learnt, first, that the mode of nuclear division observed in most of the dividing cells of malignant growths resembles very closely, or is even identical with, that seen in the reproductive tissues and differs greatly from the mode of division in ordinary somatic cells; secondly, that this form of mitosis is found not only in malignant new growths occurring in human beings but also in all the malignant growths examined which occurred in lower vertebrates of many species. What conclusions may be drawn from these data? To say that because the mitotic changes in cancer resemble very closely the mitotic changes in reproductive tissue therefore there is necessarily an identity in the physiological processes of these two tissues is a faulty syllogism; for as we know nothing of the true meaning of the nuclear changes in cell division we are utterly unable to predicate anything as to the interpretation of the nuclear changes in malignant growths. Therefore any theory of etiology depending on this resemblance rests on a very frail support. And if we cannot see at present how these recent observations can serve to elucidate the difficult problem of cancer genesis so we are equally unable to draw any very hopeful inferences as to a treatment of cancer which may serve to control this widespread scourge. Nevertheless, every new fact, every new idea, every new aspect of facts already known helps forward the day when we shall understand fully the etiology and treatment, both preventive and curative, of malignant disease. We congratulate Dr. BASHFORD heartily on the issue from the central laboratory of the Cancer Research Fund of so important an addition to our exact knowledge. He has furnished the governing body, among whom may be found the name of His Majesty the KING, with an admirable argument wherewith to charm money from the public pocket.

The Illegal Detention of Lunatics.

A MAN named AVARD was convicted under the Lunacy Act, 1890, at Bearsted in Kent on Jan. 18th and fined £15 with £10 costs for receiving lunatics in an unlicensed house. He had apparently done this for some time, as one of the inmates of this establishment, of whom there were seven, had been there since 1888. Dr. F. P. DAVIES, medical superintendent of the Kent County Asylum, who, instructed by the Lord Chancellor, had visited AVARD'S premises, informed the magistrates that he found the bedding used by some of the inmates in an indescribably filthy condition, that there was no provision for safety in the case of fire, that there were only two attendants of any kind, and that he could not ascertain that any medical man had attended any of the persons received. In the circumstances the penalty imposed may be regarded as a light one but the magistrates were evidently impressed with the length of time during which this very undesirable institution had existed without attracting attention. No doubt the Commissioners in Lunacy acted as soon as they were informed, but it is certainly a matter for surprise that no one should have thought it desirable to interfere sooner. The nature of the house and the outline of the provisions of the lunacy law are matters of which, it might be thought, the local police would have some cognisance and in which members of the public might also reasonably be expected to take an interest. Instances of the detention of the insane in unlicensed houses under the care of persons, not only unprovided with any legal title to practise medicine but not even conversant with nursing, are brought to light from time to time. Sometimes the persons so detained are found to have been treated with every care and those charged with detaining them have disputed their guilt on the ground that the mental condition of the patients was not such as to require certification. Two instances of this occurred in the metropolitan district in September, 1901, and in September, 1902, respectively, but in both of these cases the magistrates did not accept ignorance of the fact that a breach of the law was being committed as an excuse and fines were imposed larger than that inflicted upon AVARD. Cases such as these present features which show the need for public supervision and inspection whenever the mentally weak have to be provided for.

In most instances the person charged is usually found to have had no medical training and no experience in the tending of the feeble minded. Unfortunate persons, harmless but imbecile, frequently suffering from senile dementia accompanied perhaps by chronic palsy of the limbs, become a burden to their relatives who desire to get rid of the charge of them and at the same time to secure their object with the minimum of expense and publicity. The poor creatures thus afflicted are consequently handed over to someone who is recommended to the relatives by a carefully worded advertisement and afterwards, so long as the small payment agreed upon is maintained, can be conveniently forgotten. When someone, who takes an interest in the welfare of his fellow creatures apart from any personal acquaintance which he may have with them, chances to call the attention of the Commissioners in Lunacy to what is going on it is found that the insane persons have been maintained alive, for that is necessary in order that their keepers may derive an income from them, but that beyond this they have been allowed to live in a state of filth, misery, and neglect, constituting cruelty of the grossest kind.

At the house of AVARD it will be noticed there were no precautions against fire, and no doubt had a fire taken place a holocaust would have been the result with the probable

consequence of an indictment for manslaughter against AVARD himself. It is not often, no doubt, that institutions so large as his go on for so long unobserved, but at the same time large premises give the idea that a home for the infirm is being maintained and thus act to some extent as a protection to the unlicensed masters of such establishments. The Commissioners in Lunacy must depend for their information upon the goodwill of the public, and members of the public, including medical men, who are not unlikely to be acquainted with the reputation of houses in their neighbourhood, no doubt do a good work in calling the Commissioners' attention to the desirability of inquiry where the treatment of persons helpless on their own behalf is concerned. The Commissioners do not themselves visit the unlicensed house, but the Lord Chancellor or the Home Secretary has power to make an order requiring a specified person or persons to visit a place where alleged lunatics are detained and to make a report. It was in pursuance of such an order that Dr. DAVIES visited the premises of AVARD in the case under discussion, with the result that the inmates are now, it is to be hoped, in institutions where proper care will be taken of them. Where two or three persons only are detained illegally, or only one, observation is less likely to be excited, but the law provides a remedy and the Commissioners in Lunacy are ready to enforce it wherever evidence is obtainable upon which they can act.

The National Hospital for the Paralysed and Epileptic and Organised Scientific Research.

THE appeal in aid of a research fund, which has just been issued by the authorities of the National Hospital for the Paralysed and Epileptic in Queen-square, is one that deserves the earnest consideration of all who are in a position to promote the attainment of the end desired. The hospital in question from its very foundation has occupied a unique position as one in which the advancement of science has been recognised as a primary object of its existence. Originally founded by two ladies, who had witnessed the prolonged sufferings from paralysis of a beloved relative and who desired to prevent the occurrence of similar suffering in others, the hospital received the stamp of its future character from the first appointments made to its medical staff, appointments which included the names of BROWN-SÉQUARD, of LOCKHART CLARKE, and of CHARLES BLAND RADCLIFFE. Besides affording material for their investigations it was the first hospital in London, or probably in Great Britain, to possess the means for adequately conducting and testing various forms of electrical treatment, and it has always been conspicuous for its promptitude in recognising and in rendering available every ray of light which could be thrown upon its proper work by those engaged in other departments of medical inquiry. Ophthalmic surgeons, an aural surgeon, a laryngologist, were from time to time added to the staff, not so much because the departments thus represented would otherwise have been neglected by the physicians and surgeons as in order to provide that nothing should be lost which it was possible for them to supply. It has been long conspicuous as one of the chief centres of cranial and spinal surgery in the metropolis and a pathologist occupies an important position among its officers. With these advantages, it can be no matter for surprise that it has been much frequented by visitors from the continent and from America, or that its out-patient rooms have often been so thronged by post-graduate students as to remind those frequenting them that, just as shoemakers' wives are said to be the worst shod, so the conditions of atmosphere tolerated by medical audiences are often such as could not be conscientiously approved in places of even temporary sojourn for their patients. Nor is it the least among the merits of the institution as now existing that it was lately the arena of a conflict between the lay committee and the medical staff who were determined to recover a position of influence in its management of which they had been gradually and quietly deprived. We need not dwell upon the details of a dispute which will be fresh in the recollection of our readers and it is enough to say that the staff, after enduring all things at the hands of the committee and of its executive officer, were at last completely successful in an appeal to the general body of the governors. The committee was reconstituted with members of the staff forming an integral part of it and with the complete abolition of the sway previously exercised by a non-medical official.

A hospital with these antecedents and abundantly supplied with clinical material of the most varied description would be untrue to its traditions if any slackness concerning research were displayed by the members of its staff, and hence it is not surprising that the pages of *Brain*, the official journal of the Neurological Society, have been largely occupied with accounts of the work done within its walls. To one portion of this work the appeal before us might properly call attention—namely, to the paper on Landry's Paralysis contributed by Dr. E. FARQUHAR BUZZARD to the spring number, and containing an account of a micrococcus which he obtained from a patient dying from the disease in the hospital and from cultures of which he produced an analogous form of paralysis in a rabbit. We possibly do not exaggerate in assigning to this discovery a place equal in importance to that of the discovery of the trypanosoma of sleeping sickness, for the former disease was previously quite as mysterious as the latter and, although not frequent, it has of late years been increasingly observed both in this country and in America. One of the earliest cases recorded in London was communicated to the Clinical Society in 1875 by the late Dr. ANSTIE who attended it in conjunction with the late Sir ANDREW CLARK and who, like him, was not only quite unprepared for the rapidly fatal issue but did not at first recognise that he was dealing with a condition involving danger. Dr. ANSTIE'S paper opened ground so completely new that it elicited no other remark than an expression of sympathy with the father of the patient who was himself a member of the society. No one had a word of suggestion either as to the actual condition or the possibilities of treatment. In contrast with this Dr. BUZZARD is able to draw upon a chronicle of several recently recorded cases, and although he

cannot as yet offer any suggestion as to the mode by which the micrococcus obtains entrance into the human body the whole history of science teaches us to expect that the knowledge of causation will be the first step towards the attainment of control. In many other directions the abundant material of the hospital will no doubt admit of being utilised for the benefit of mankind, and the appeal is one which will, we trust, meet with a prompt and sufficient response. It was a saying of FARADAY that new knowledge is frequently passing unrecognised before our eyes, and those who are eager to be on the watch for its appearance and its applications are certainly entitled to have all unnecessary difficulties removed from their path. Of these, so far as research is concerned, one of the most important is its costliness. We have the men, we have the opportunities, and what we chiefly want is to have "the money too."

Annotations.

"Ne quid nimis."

THE HOUSING QUESTION.

IN THE LANCET of Jan. 23rd, p. 248, attention was called to the evidence given at an inquest as to the enormous rent commanded by those who let rooms to the poor in the East-end of London. The difficulties which beset the question of providing the working classes and the poor in London with sufficient and sanitary living accommodation at a price which they can afford to pay are not diminished by the class of tenant which has to be provided for in many instances. The following case, which recently occupied the attention of the Lord Mayor and aldermen at the Mansion House police-court on two successive days, well illustrates this and at the same time shows the high rental exacted by landlords for the rooms in which they allow their tenants to huddle themselves regardless of decency and health. The danger, both physical and moral, to children brought up in such circumstances and the fact that cases of apparently genuine distress are carefully investigated in the City will also be observed. On the first day of inquiry the charge was against a woman named Nowell of exposing her two boys, aged nine years and five years, by causing them to beg in the streets. When arrested she had nine pennies upon her and she pitifully entreated the presiding alderman not to take her children from her and to send them to an industrial school, saying that they went to school regularly already. The police stated that as far as they had then been able to ascertain the husband was a hard-working man who had been out of employment as a dock labourer and who during the past week had only been able to get half a day's work. They added that he and his wife, a daughter aged 19 years, a son aged 17 years, and three children, aged respectively nine years, five years, and two years, lived in a single room in Spitalfields, where they slept on the bare boards and that for this shelter they paid 7*s.* a week rent. With respect to the children, the alderman, who no doubt had experience of such cases, remained obdurate, but while they were remanded for further inquiries and for a school to be found for them, the parents were not forgotten and the Mansion House Unemployed Committee was able to send a police constable at once to the father with the address of a firm where employment would be given to him. On the following day evidence was given that the constable intrusted with the matter called several times at the address of the working man but found no one there, and that the man took no notice of a message left for him informing him of what would be done on his behalf and recommending him to call at the police station. Finally, the constable went to the room in question between 10 and 11 at night when he found the husband drunk and quarrelling with his wife. He gave his message but the man refused to listen to it or to take the address of the firm which would have given him work. At the same time he was abusive, declared that he would drink every halfpenny he had got, and with regard to the proffered employment said that he did not want "any of your —— twopenny-halfpenny jobs." It will easily be understood that while parents of this class can live upon their children's mendicancy, and while those who give alms indiscriminately will assist them to do so, it is difficult to prevent children from being brought up in the midst of disease, starvation, and crime. The housing question is also rendered more complicated where people of this class exist in considerable numbers. They will not go into quarters where decency and reasonably good behaviour with the regular payment of rent are insisted upon and as long as they can find buildings of any kind where they will be tolerated they are content to live there under conditions dangerous to their own health, that of their children, and that of the public. To enforce universal conditions of sanitary life in the case of a huge population, leaving as the only alternative prison or the streets, seems hardly possible, but short of such compulsion it is not easy to see how a healthy and decently behaved people can be obtained or how matters can be prevented from going from bad to worse. Any measures not universally applied tend to increase the congestion in the districts where cleanliness and sanitation are already most needed.

THE POSITION OF WORKHOUSE MEDICAL OFFICERS.

WHILE as the result of concerted action on the part of members of the profession the status of medical men in the navy, army, and Indian services has been improved, the apathy exhibited by Poor-law medical officers has prevented any improvement in their circumstances and has even in some cases been productive of changes for the worse. Triumphant democracy has reversed the old social order and the workhouse medical officer, who has probably some claim to be regarded as a man of culture and education, holds his post at the will of persons with whom he would not in a private capacity care to associate. In a similar way the Local Government Board still insists on including the control of the medical officer among the functions of a master and a matron who are often enough a promoted gate porter and his wife. Our attention has been called to a case in which the right of a medical officer to admit a visitor to a ward nominally in his charge is disputed by the master and matron and however absurd such a condition of affairs may seem it is clear from the orders of the Local Government Board that the right can only be exercised by permission of the officials mentioned. Thus it was laid down, in 1847 be it noted, that one of the duties of that dignified and potent officer the porter is "to keep the gate and to prevent any person not being an officer of the workhouse or of the union, an assistant Poor-law commissioner or any person authorised by law or by the commissioners or guardians from entering into or going out of the house without the leave of the master or matron." The attitude of the Local Government Board towards the hierarchy of the casual ward is shown by a circular letter issued in January, 1895, which runs thus: "The improvement that is taking place in the character of workhouse nursing from the employment of trained nurses ocasionally

leads to objections being raised to the legitimate exercise of the authority of the master and matron in the arrangements connected with the sick wards. The Board consider that so long as these establishments are constituted as at present the nurses should be responsible to the medical officer for the treatment of the patient, but should clearly understand that in other matters they must defer to the authority of the master and matron." From the views expressed by the recent Departmental Committee on Nursing it would appear that the Board is not now quite so sure of the advisability of leaving a free hand to the master and matron as regards nurses. Perhaps in course of time it may recognise that the medical officer, too, has feelings worthy of consideration.

SCIENCE IN BOYS' SCHOOLS AND MEDICAL EDUCATION.

AT no time probably since the introduction into this country of compulsory school attendance has more general interest been taken in the question of the subjects and methods of education than at the present moment. We have left behind us, we hope for ever, the controversy as to the practical utility and absolute necessity of some form of education for every one of our fellow subjects. We are now entering upon what bids to be even a more prolonged controversy as to the matter and manner of education which shall prove most efficacious in fitting our race to perform its allotted functions. Now that it is recognised that education is for all it is being questioned whether the methods of instruction in the past may not be improved upon. Doubt as to the perfection of our methods extends through every department of learning from the board school to the university. To our shame, but also perhaps to our advantage at the present time, other countries have recognised the need of reform before us and have made experiments in various directions from which if we are wise we may profit. As in medicine so in education, the empirical method is not always the best means of testing efficiency. It is not easy to estimate the influence of all the factors in the environment and because good men are turned out from our public schools it does not follow that the character of the education in those institutions does not need improvement. It is not only by watching the result of different forms of education that we can tell which is the most desirable. Thoughtful consideration of the objects to be attained by education and of the probable results of different measures may often lead to practical reforms, just as researches in the laboratory and the contemplations of philosophical pathologists have often given the clue to effective methods of treating cases which have baffled practical physicians. In trying to ascertain the particular scheme of school education most suitable for an intending student of medicine it is not sufficient even if it were possible to contrast the respective merits of medical practitioners submitted to rival methods of scholastic treatment. Statistics could be put to no more futile use than to estimate the percentage of successes in final medical examinations achieved by candidates educated on the classical and modern sides respectively of our chief public schools. Nevertheless, those who are engaged in medical education must necessarily take the keenest interest in the preliminary instruction of their pupils and they are generally supposed to hold strong views upon the much-vexed question of the rôle of science in school education. The belief that teachers of medicine would naturally desire that their pupils should have studied science at school arises from a false assumption as to the chief objects of a boy's education against which a strong current of opinion is now setting. The tyranny of the examination system is causing a revolt against the view that the acquirement of knowledge is the main object of education. Systems of education dominated by examinations tend to become little else than methods of storing facts in students' brains, since it is the success of this process which is most readily estimated by the examiner. If a teacher of medicine desired his pupil to be handed over to him with his brain well stored with facts upon which subsequent knowledge could be built there is no doubt preference would be given to one who had been instructed in a school in which natural science was fully taught. But teachers of medicine, in common with all those whose duty it is to impart instruction to youths who have completed their school curriculum, find that their best material is characterised not by knowledge but by brain power. The facts which a boy has acquired at school are of little importance compared with the effect that the school training has had upon his intellect and his morals. A boy of high moral sense, well trained to observe and capable of logical reasoning, will make a better medical student though he has never had the least smattering of so-called scientific education than an unobservant boy with an illogical brain stuffed with facts connected with elementary chemistry, physics, and biology. Recognising this fact the medical profession should use its influence to secure that the course of study in preparatory and public schools should be that best suited to develop a boy's senses and intellectual faculties regardless of the subsequent uses to which the facts acquired may be put. Schoolmasters are already too much harried by those whose sole idea of education is that it shall provide useful knowledge. Science is more or less on its trial as a subject of education in schools and it is believed by some to be a very unsuitable subject. It would be unfortunate if the supposed needs of the medical student led to the retention in the school curriculum of a subject which failed to promote intellectual development, inasmuch as the pure science which a medical student requires can easily be provided after school is over. There are some who are disposed to give great credit to the medical profession for such share as it has had in encouraging the establishment of science laboratories in secondary schools. It is a question requiring the most thoughtful and careful consideration whether such laboratories are of real value and in helping to solve this problem the medical profession must not regard the matter from a selfish or utilitarian point of view.

ALBUMINURIA IN THE NEWLY BORN.

IT is well known that the urine passed shortly after birth differs in several details from that passed later, notably in being of low specific gravity, turbid from uric acid and epithelial cells, and of darker colour. Dr. Ssesenowski of St. Petersburg has investigated the urine of infants in the first few days after birth with especial reference to the presence of proteid substances and has recorded his observations in the *Wratschebneja Gazette*, No. 21, 1903. He finds that in the first six days after birth traces of albumin can be detected in 22 per cent. of the cases and traces of mucin in nearly every case. On the first day after birth albumin can be demonstrated in as many as 30 per cent. It is found more frequently where labour has been protracted and is thus more common in first-born children. The less the absolute body-weight of the infant, and the greater the relative diminution of this in the first days of life, the more frequent is the presence of albumin; moreover, its presence appears to depend to some extent upon the temperature of the infant. The presence of mucin is most constant on the first day after birth, when it can be demonstrated in 96 per cent. of the cases. It gradually lessens, so that on the sixth day it can only be found in 50 per cent. Traces of uric acid are found in 60 per cent. and both this substance and

albumin are more frequently found when the urine is acid and deeply coloured. Dr. Ssesenowski regards it as incorrect to speak of a "physiological albuminuria" in infants and considers that previous observers have not sufficiently differentiated between albumin and mucin in their investigations. These observations if confirmed are of interest in reference to the frequency of some degree of albuminuria in apparently healthy children and youths, which is estimated by Dr. Clement Dukes to be at least 22 per cent. No explanation is given of this albuminuria in newly born infants, although it is probable that the altered condition of the circulation at birth may be one factor and the altered relations of the skin may possibly be another.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND: LECTURES FOR 1904.

THE Hunterian lectures will be delivered on Feb. 15th, 17th, and 19th, by Mr. T. Crisp English on the After-effects of Head Injuries; on Feb. 22nd, 24th, and 26th, by Dr. Arthur Keith on the Structure and Evolution of the Auricles of the Heart and of a Competent Valvular Mechanism round their great Venous Orifices; on Feb. 29th and March 2nd and 4th, by Mr. L. B. Rawling on Fractures of the Skull, including Mechanism, Pathology, Complications Immediate and Remote, and Treatment; and on March 7th, 9th, and 11th, by Mr. A. W. Mayo Robson on the Surgery of the Pancreas. The Arris and Gale lectures will be delivered on March 14th, by Dr. Percy J. Cammidge on the Physiology and Chemistry of the Pancreas; and on March 16th and 18th, by Mr. J. Herbert Parsons on the Neurology of Vision. The Erasmus Wilson lectures will be delivered on March 21st, 23rd, and 25th, by Mr. E. M. Corner on Acute Infective Gangrenous Processes (Necroses) in the Alimentary Tract. Each of these lectures will be delivered on the respective days at 5 P.M. precisely.

PUBLIC HEALTH IN THE PHILIPPINE ISLANDS.

THE reports of the Board of Health for the Philippine Islands and city of Manila for the months of July and August, 1903, occupy 40 closely printed pages, the introductory portions of each being signed by Dr. E. L. Munson, captain and assistant surgeon in the United States Army, acting commissioner of public health. The first question that is discussed is the number to be assigned as representing the population of Manila. According to a count made by the Board of Health in May, 1901, the number was then 244,732, but according to the first official census under the American occupation, made during 1903, it was 219,941. The decrease in the population of the city since 1901 is attributed to the return to the provinces of persons who had sought security in Manila during and after the late insurrection. This population of 219,941 is classified according to nationality as follows: Americans, 4389; Filipinos, 189,782; Spaniards, 2528; other Europeans, 1117; Chinese, 21,230; and all others, 895. During July there were 346 births and 620 deaths in Manila, giving a general birth-rate and death-rate of 18·52 and 33·21 per 1000 respectively. For the three predominant nationalities the death-rates per 1000 were as follows: Americans, 10·74; Filipinos, 35·32; and Chinese, 22·75. During July there were seven deaths from plague and 38 from cholera. Cholera also became prevalent in three towns lying along the Mariquina river above the intake of the Manila water supply. The Board of Health therefore sent a corps of medical men, sanitary inspectors, and disinfectors to the Mariquina Valley from Manila, obtained a larger military guard than hitherto for the purpose of quarantining the river, established the pail conservancy system for the reception of human excreta, and organised a corps of scavengers for the collection and proper disposal of the same. By these measures the infection of the Manila water-supply, which at first appeared almost inevitable, was avoided and the disease was stamped out in 30 days. During August the new sea-going steam scavenger barge of the Board of Health was received from the builders. It is of 285 tons burden and is capable of efficiently removing and of dumping at sea the entire excremental waste of the city.

THE EARLY DIAGNOSIS OF ARTERIO-SCLEROSIS.

IN the processes of involution which occur with advancing years the most important and widespread by far is the loss of elasticity of the blood-vessels due to arterio-sclerosis. Accompanying this morbid process there appears a train of symptoms of varying character, generally grave and lasting throughout life. In *American Medicine* of Jan. 2nd Professor Alfred Stengel of the University of Pennsylvania deals with the early symptoms, diagnosis, and treatment of this important affection. Attention has been drawn recently, especially by Clifford Allbutt and von Basch, to the factors which produce premature arterio-sclerosis in many persons. An early recognition of the development of this condition, says Professor Stengel, and a proper regulation of life and habits "may defer the more advanced stages of this malady, if they cannot cause a restitution of previous conditions." When marked arterio-sclerosis of the aorta and large vessels is present the smaller vessels and capillaries have long been affected. From the point of view of diagnosis, therefore, it is important to recognise the involvement of the smaller blood-vessels rather than that of the main trunks. Von Basch, who has given much attention to the subject, suggests that the term "angio-sclerosis" should be used for the widespread and universal affection of the vascular system, while the term "arterio-sclerosis" should be used in a more restricted sense for affection of the peripheral arterial system, and in this opinion Professor Stengel concurs. Starting from the view of Gull and Sutton that, with rare exceptions, the disease begins as a diffuse and general disease of the blood-vessels it is stated by Professor Stengel that the intermediate and later stages show a special local advancement—thus in one instance we meet with a cerebral arterio-sclerosis, in a second with a cardiac affection, and in a third with a renal disorder. The causes that lead to arterio sclerosis have been more common in the United States during the last five decades, a view, adds Professor Stengel, almost uniformly held by physicians of experience. An analysis of the statistical evidence from the census reports of the United States leads to the same conclusion. Among the etiological factors are enumerated continued mental anxiety and exhausting mental work, while the toxic effect of typhoid fever is said to predispose to arterio-sclerosis in later years. Similarly excessive exercise and athletic indulgence may cause changes in the heart muscle and blood-vessels which during the period of robust manhood are of little consequence but which in later life may increase in degree and seriousness, as was pointed out in a leading article in THE LANCET four years ago.[1] Other important causes of arterio-sclerosis are alcoholic intemperance, overfeeding, chronic lead poisoning, and syphilis. "I have seen many cases of advanced arterio-sclerosis," continues Professor Stengel, "in persons who have lived the most correct lives in every respect except overfeeding." A tendency to arterio-sclerosis also exists in some families. In reviewing the early symptoms it is pointed out that the first effects of loss of elasticity in the blood-vessels are an impediment to the easy circulation of the blood and a consequent increase

[1] THE LANCET, Jan. 20th, 1900, p. 174.

of the work of the heart, with accompanying heightened blood pressure which remains constantly high with occasional remissions. This elevation of blood pressure is found to be an invariable symptom; it is detected by the finger on the pulse or by the use of the manometer of Riva-Rocca or von Basch. Auscultatory prolongation of the first heart sound and a sharp accentuation of the second or aortic sound are present. The earliest subjective or other symptoms which lead the patient to seek medical aid are a failure of vigour, a general feeling of reduced vitality, anæmic pallor, and undue sweating on exertion. "It is active members of the better class, men who have achieved much and suffered much though outwardly successful, that fall early victims to this disease." The easy-going and indolent, adds Professor Stengel, may develop this disease but seldom early except as the result of excesses in eating and drinking. Slight and occasional albuminuria in the early stages of arterio-sclerosis shows that the disease has definitely affected the kidneys but casts are not found in the urine until the disease is considerably advanced. Early cardiac symptoms such as arhythmia, increased force of the cardiac impulse and apex beat, and occasional slight attacks of dyspnœa are frequently encountered. The abuse of tea, coffee, alcohol, and tobacco in such cases is a serious matter, tending to accelerate the progress of the disease. Finally, ophthalmoscopic examination may throw valuable light on the condition. Thus thickening of the retinal arteries and narrowing of the retinal veins have been observed early in the course of this affection in several cases by de Schweinitz.

CANCER RESEARCH AND TEACHING IN BIOLOGY.

Dr. E. F. Bashford, the superintendent of the Cancer Research Fund, has caused to be sent to all British biologists a letter from himself to Mr. A. E. Shipley of the Museums, Cambridge, together with a circular letter in reply from that teacher. Mr. Shipley says:—

> I am told it would very materially assist the work of the Cancer Commission if they could collect material of the nature of malignant or pathological growths from the lower vertebrates, and if it exists, from invertebrates. Cysts or tumours caused by nematodes, trematodes, or cestodes are not required, but any tumour of unknown origin if sent to London would be carefully investigated at the Cancer Research Laboratory and might prove of real value in the inquiry. Such specimens, whether already preserved or fresh, should be placed in weak formalin, and forwarded by post to the Director, Cancer Research Fund, Examination Hall, Victoria Embankment, London, W.C. Pathological material of this kind is of special importance if found in amphibia, or in fishes, or in invertebrates, or in embryos generally. I understand that the Cancer Commission in Berlin have already received much useful material from the various zoological laboratories in Germany and it would greatly assist the work of the Cancer Research Fund in this country if similar supplies could reach them from our British institutions.

The subject of cancer is so important to the medical profession and to the public, while at the same time so little is known of its nature or etiology, that no means of possible information or of investigation should be left untried and we are sure that teachers of biology throughout the country, together with their pupils, will respond heartily to the above appeal.

THE REBUILDING OF ST. BARTHOLOMEW'S HOSPITAL.

ON Jan. 26th a largely attended meeting, of the proceedings at which we give a condensed report in another column, was held at the Mansion House, the Lord Mayor of London being in the chair. The treasurer of the hospital, the Lord Bishop of London, members of the medical and surgical staffs of the hospital, the Chief Rabbi, and representatives of the great mercantile houses of the City all spoke emphasising the necessity for an appeal to the public for funds wherewith to put the ancient foundation into a condition compatible with modern needs. Two motions were carried, the one unanimously and the other with two dissentients, while subscriptions paid or promised were announced to the amount of £40,000. We have already so fully set out in THE LANCET of Dec. 5th, 1903, p. 1587, the reasons why an appeal should be made that there is no need to recapitulate them here. We hope, however, that it will not be long before definite plans for reconstruction are put before the public and that a special appeal will be made to every old St. Bartholomew's man throughout the empire. The sons of the great hospital are working in every quarter of the globe. All can give something, some perhaps only little, others much. Even the price of one brick or one stone will be a help, and if the sons of St. Bartholomew's Hospital do not send their aid others less connected with the foundation cannot be expected to do so. We are sure, however, that the money will be forthcoming and it only remains for all St. Bartholomew's men to remember Sir William Treloar's words that the appeal committee means to prosecute the appeal and it means to get the money.

THE PLURALITY OF DYSENTERY.

WRITING recently under this title in the *Archives de Médecine et de Pharmacie Militaires* Professor Vincent of Val de-Grâce gives a summary of the views which of late years have been advanced regarding the etiology of dysentery. The question, he says, is one of great importance to military medical officers not only from the point of view of treatment but also with regard to prophylaxis. Until the precise nature of an infecting agent is known preventive measures must always be of a more or less empirical description. Quincke and Roos, he continues, have succeeded in differentiating several kinds of amœbæ, some being innocuous or at all events capable of residence in the digestive tube of healthy people without giving rise to reaction, and others pathogenic, possessing the characteristic properties which cause dysentery. In addition to the non-pathogenic amœba intestinalis vulgaris these writers recognise an amœba coli mitis and an amœba dysenteriæ, the last named being smaller than the other as well as more mobile and also inclosing red globules. The amœba coli mitis contains only bacteria and is pathogenic in man alone. The amœba dysenteriæ is pathogenic in man and also in the cat and possibly in the dog. Summing up, Professor Vincent comes to the conclusion that dysentery is complex; it is the common expression of several infections of a different nature. As a matter of fact the human organism when in conflict with pathogenic agents is not in possession of an unlimited number of modes of reaction. If the lesions caused by the bacillus of Shiga and by the amœba of Loesch are sufficiently different the symptoms by means of which the mucous membrane of the large intestine makes known its suffering are identical in the two affections. It seems as though the etiological unity of dysentery dogma, which a few years ago no one would have dreamt of contesting, was about to vanish. There are various kinds of dysentery, just as there are various kinds of broncho-pneumonia. Each kind of dysentery has, it may be, its special capabilities for epidemic transmission. That is what future investigations will teach us. In connexion with the plurality or not of dysenteric poison attention may be drawn to a thesis entitled "Les Dysenteries, Étude Critique" by Mlle. Broïdo, a Parisian student who is now medical officer on board a passenger steamer belonging to one of the great French lines. In this work Mlle. Broïdo treats of the pathogenic complexity of dysentery and summarises the actual state of the question. She recognises an amœbic form of the disease and also a bacillary form. In a group still requiring investigation she includes (1) dysentery due to the balantidium coli; (2) dysentery due to the bacilli of Ogata; (3) dysentery due to the bacilli of Roger; (4) dysentery due to the cocco-bacillus of Lesage;

and (5) finally dysentery due to the various pseudo-dysenteric bacilli. Mlle. Brodo does not think that true dysentery can be caused by non-specific microbes.

A PRAISEWORTHY FAD.

POPULAR crazes in matters of medicine and of hygiene are more often than not things to be deplored. If they are not actually harmful they are generally ridiculous, and if they are of no benefit to the general public assuredly they are, as a rule, of equally little advantage to the medical profession. The net result is most often a fine haul for a few quacks and loss and disappointment for a large number of "patients." It is with considerable complacency therefore that we may view what seems almost to amount to a "craze" at the present time. We allude to the prevalent exploitation of eating slowly and eating less. A more generally beneficial doctrine could hardly be chosen for the popular medical idol of the moment. A lay contemporary has recently devoted many paragraphs to the researches and experiences of an American gentleman, Mr. Horace Fletcher, who has made it the business of his life to demonstrate that most people eat too much and eat too fast. Incidentally he believes that a new throat reflex has been discovered insuring proper mastication for the "slow feeder." Mr. Fletcher's results have interested physiologists and many of his experiments were carried on at Cambridge in association with Sir Michael Foster and other physiologists at that place. As an enthusiast Mr. Fletcher sees in the reduction of the quantity of food necessary for the individual far-reaching results, amongst others the kernel of national military success by the simplification of the commissariat problem. Napoleon's dictum that an army "moves on its belly" is to be altered and the instructed army will hardly need a belly to move on. Whatever may be the wide effects of the adoption of such a system of feeding as Mr. Fletcher proposes, at any rate there can be no question of the individual advantage that would follow in most cases from such a course. A similar lesson, in a less convincing form, is, of course, the central point of the mysterious successes that attend Mr. Barrie's heroine in his play of *Little Mary*, and if when lay writers deal with medical subjects they were always to work in such directions the medical profession would welcome them as valuable co-operators, as, indeed, we do in the case of Mr. Horace Fletcher.

POOR-LAW MEDICAL OFFICERS IN THE HIGHLANDS AND ISLANDS OF SCOTLAND.

THE Scottish Poor Law Medical Officers' Association, which is a body formed for the purpose of looking after the interests of a hard worked and very poorly paid body of men, has just issued its report for 1903. To Mr. J. Cathcart Wason, Member of Parliament for Orkney and Shetland, was intrusted the responsible task of introducing in Parliament a Bill promoted by the association. He was, however, unable to do so during the last session. The report further states that owing to the advertisements of the association which have appeared in the medical press applicants for vacant Highland and island appointments have applied to the secretary of the association for information with the result that the inquirers ceased to be applicants for the posts. The committee hopes this year to advertise also in the *Scotsman* and the *Glasgow Herald*. Particulars are then given of various parishes which have been without medical officers during the greater part of the past year. The report ends with an appeal to all Poor-law medical officers in Scotland to join the association and this appeal we cordially endorse. We are always glad to do what lies in our power to assist a Scottish Poor-law medical officer to obtain the advantages for which we have always contended—namely, fixity of tenure, adequate salary, a free official residence, and a free annual holiday—i.e., with payment by the parish council of a locum-tenent. But we cannot help those who will not help themselves and we learn from the report that although there are 850 Poor-law medical officers in Scotland only 350 nominally belong to the association and of these many omit to pay their subscriptions. This, as the report goes on to say, is not fair.

THE PREVENTION OF LEPROSY.

OUR readers have probably read the correspondence which has occasionally appeared in the *Times* on the causation and prevention of leprosy. A long letter was recently published from Mr. Jonathan Hutchinson who once more explains in considerable detail his theory that leprosy is due in the main to the consumption as food of decomposing or imperfectly cured fish. This theory has received some support, editorially and otherwise, in the columns of our contemporary. Mr. Hutchinson admits that the fish hypothesis has not as yet been openly endorsed by many of the leading members of the medical profession and we have throughout maintained that his theory has not yet been proved. His views, however, can only be received with respect and the hope expressed that further investigations will be forthcoming which will corroborate or otherwise the conclusions at which he has arrived after the most painstaking efforts to discover the truth. If he is correct in the etiology of the disease his remarks on its prevention should receive world-wide attention.

THE BRITISH DENTAL ASSOCIATION.

AN extraordinary general meeting of the British Dental Association was held on Jan. 23rd at the Examination Hall, Victoria Embankment, London, to consider the question of the expediency of a degree in dentistry. A motion was proposed by Mr. J. H. Badcock and seconded by Mr. L. Matheson:—

> That a memorial be presented to the Senate of the University of London praying for the institution, in the interests of dental science, the public, and the dental profession, of a degree in dental surgery in the Faculty of Medicine, but expressing the further opinion that it would be undesirable to make the possession of the M.B., B.S. degrees a necessary qualification for such a degree.

An amendment was proposed by Mr. David Hepburn and seconded by Mr. Montagu F. Hopson:—

> That the creation of degrees in dentistry is undesirable and that the opinion of this meeting, specially summoned to consider the expediency of a degree in dentistry, be communicated to the universities of the United Kingdom.

A vigorous discussion ensued and the amendment was carried by a large majority.

RINGWORM AND THE METROPOLITAN ASYLUMS BOARD.

AT a meeting of the Metropolitan Asylums Board on Jan. 23rd the children's committee reported that at the Downs Ringworm Schools during the year ending Dec. 31st, 1903, 618 children were admitted, 208 were discharged, and one had died. Of the discharges, 153 were pronounced cured, 14 were transferred to the Bridge School or elsewhere, and 41 were sent for by the guardians. The committee stated that it regretted to observe that so large a number of children were removed from the schools before they were cured of the disease, thus tending to defeat one object for which these schools were intended. Although the committee was not prepared to indicate a remedy it thought that some action should be taken and therefore recommended that the facts should be reported to the Local Government Board and that it should be asked to favour the managers with an expression of its

views thereon. The report and the recommendation were adopted.

THE DEATH OF WHITAKER WRIGHT.

WHEN it was first learnt that Whitaker Wright, found guilty upon all counts of the indictment against him and sentenced to seven years' penal servitude, lay dead within the precincts of the court in which he had been tried, suicide seemed so probable and appropriate an ending to his career that it must at once have suggested itself to the minds of all. A story more or less circumstantial of sudden heart failure followed and seemed to the lay mind little less likely to be true when those who heard it considered the physical and mental strain to which the man had been subjected. Medical men, however, failed to recognise in the events of his last moments much probability of death having occurred either from heart failure or cerebral hæmorrhage. It is now known that it was by his own act that he obtained release from the sentence which his reckless pursuit of wealth *per fas atque per nefas* had brought upon him, and that the confidence with which he had vaunted his innocence had been accompanied by the doubt lest a jury of his fellow men might hold other views. Comment was recently made in THE LANCET upon a Home Office circular as to the prevention of suicide by prisoners admitted to bail, and it was pointed out how rarely suicide is attempted by men who have violated the law and have been brought to book for their misdeeds. Whitaker Wright, however, was an exceptional man, and apart from any misgiving which he may have felt latterly as to his position in the eye of the law it is doubtful whether at any time he acknowledged even to himself that he had committed any moral wrong. Such a man would never have been able to reconcile himself to enduring a sentence, the justice of which a weaker criminal would have inwardly admitted. He has preferred, on the other hand, to pay the penalty which the law of all civilised nations regards as the heaviest that can be imposed.

LECTURES AT THE HOSPITAL FOR CONSUMPTION, BROMPTON.

THE lectures and demonstrations given by the members of the visiting staff of the Hospital for Consumption and Diseases of the Chest, Brompton, have now recommenced, the first lecture having been delivered by Sir R. Douglas Powell on Jan. 27th. These lectures are held on Wednesdays, at 4 P.M., and are free to all qualified medical practitioners and to students of medicine. The attendances at the lectures which were given in the first part of the winter course fully prove the real value attached to them by those for whom they are intended. The wealth of clinical material available at the hospital is immense; numerous cases are demonstrated at each lecture, so that those who are present are enabled to obtain the benefits conferred by actual examination of the patients. The next lecture will be given by Dr. J. Kingston Fowler on Feb. 3rd, the subject being "The Treatment of Thoracic Aneurysm by Gelatin Injections.". The course will be continued until March 16th.

THE medical officer of health of the Cape Colony reports that for the week ending Jan. 2nd only one case of plague was reported throughout the colony—namely, that of a native child at East London. Plague-infected rats were found at Port Elizabeth and at East London, but of 205 rats examined during the week within the Cape Town and Harbour Board area none was affected with plague. As regards the Mauritius a telegram from the Acting Governor (received at the Colonial Office on Jan. 23rd) states that for the week ending Jan. 21st there were 16 cases of plague and 12 deaths from the disease.

THE Swiney Prize, founded by Dr. Swiney, who died in 1844, for a work on jurisprudence, has just been awarded to Sir Frederick Pollock, Bart., LL.D., D.C.L., and Professor Frederic William Maitland, LL.D., D.C.L., for their book on "The History of English Law before Edward the First." The prize consists of a silver cup of the value of £100 and money to the same amount. The award is made jointly by the Society of Arts and the Royal College of Physicians of London and the prize, under the terms of Dr. Swiney's will, is given every fifth year on the anniversary of the testator's death.

THE Lettsomian lectures of the Medical Society of London will be delivered by Mr. C. B. Lockwood at the rooms of the society, 11, Chandos-street, Cavendish-square, W., on Thursday evenings, the 1st, the 15th, and the 29th of February, at 9 P.M. Mr. Lockwood has taken as his subject, Aseptic Surgery in Theory and Practice, and will deal among other things with the choice and use of anti-septics and with the comparative results of operations in private houses, nursing homes, and hospitals.

AT the opening of the fourteenth session of the London School of Tropical Medicine, which commenced on Jan. 15th, 28 students entered for the three months' course. Of these two are women. Seven students belong to the Colonial Office service and three to missionary societies. Four students entered for a period of study less than three months.

AS our readers know, an important meeting of Oxford graduates was held early in the year to consider the appointment of a successor to Sir John Burdon-Sanderson, as Regius Professor of Medicine in the University. We understand that at present His Majesty's advisers have made no recommendation to the post.

WE are informed that His Majesty the King has consented to open the new University buildings at Cambridge early in March.

MEDICAL PRIZES OF THE PARIS ACADEMY OF SCIENCES.—The *Revue Scientifique* of Jan. 16th publishes a list of prizes, the award of which will be decided by the Paris Academy of Sciences during 1904 and several subsequent years up to 1913. The value of individual prizes varies from 200 francs (£8) to 100,000 francs (£4000). The following are those connected with medicine or the medical sciences and having a value of 2000 francs or upwards. Prix Montyon: three prizes of 2500 francs for discoveries in therapeutics and improvements in medicine and surgery. Prix Barbier: prize of 2000 francs for a valuable discovery in medicine, surgery, pharmacy, or medical botany. Prix Bréant: prize of 100,000 francs for a discovery relating to the cure, etiology, or prophylaxis of Asiatic cholera. Prix Mège: prize of 10,000 francs for the continuation and completion of the work (*essai*) of M. Mège on the causes which have hindered or promoted the progress of medicine. Prix Leconte: prize of 50,000 francs for new and important discoveries in mathematics, physics, chemistry, natural history, and medical sciences. Prix Serres: prize of 7500 francs for the best work on embryology, applied as much as possible to physiology and medicine. Prix Dusgate: prize of 2500 francs for the best work on the diagnostic signs of death and on the prevention of premature burial. Prix Parkin: prize of 3400 francs for researches on the curative effects of carbon in its various forms, and particularly in the gaseous form in the treatment of cholera, fevers, and other diseases. Prix Chaussier: prize of 10 000 francs for the best work on legal medicine or practical medicine which has appeared for four years. Prix Lacaze: prize of 10,000 francs for works or memoirs which have advanced physiology.

OSBORNE HOUSE CONVALESCENT HOME

FOR OFFICERS OF THE NAVY AND THE ARMY.

THE KING'S GIFT TO THE NATION.

(BY OUR SPECIAL SANITARY COMMISSIONER.)

THE fact that there was no convalescent home for the officers of the navy or the army is an omission that made itself keenly felt during the South African war. Even abroad, notably Costabelle on the French Riviera, hotel keepers were offering to receive as guests or on special terms convalescent British officers, but at home neither the Admiralty nor the War Office was able to give such facilities. The convalescents therefore came to London or went to stay with friends and many doubtless suffered owing to want of a home which, though not actually a hospital, nevertheless was capable of affording all the means of continuing whatever treatment might be required. There are, of course, many convalescent homes but these are for the most part either charitable or semi-charitable institutions, or else they are commercial undertakings where the charges made are often the reverse of moderate. It was therefore a difficult matter to know what to do with officers who were discharged from the military hospitals but who were not yet fully restored to health. The necessity of convalescent homes is so widely recognised that these are provided for all classes of the community. At Birmingham and in other towns the working classes levy among themselves several thousand pounds every year so as to maintain convalescent homes of their own in the country, at the seaside, or among the Welsh mountains. In spite of the help which it might be thought would be forthcoming from the War Office and the Admiralty, that which working men, without any State aid, have done for themselves had never been attempted on behalf of the officers of the navy and the army. In the midst of the trouble which this negligence occasioned Her Majesty Queen Victoria died and on succeeding to the throne King Edward VII. naturally felt desirous of commemorating his mother's memory by some notable deed. It then occurred to the King that this purpose would be achieved in a useful and practical manner if he gave the wherewithal to found the much-needed convalescent home for officers of the navy and the army. Such a home might have been provided at a comparatively small cost on any suitable site but then it would not be connected with the late Queen and the present sovereign in a sufficiently emphatic manner. Therefore His Majesty determined to make a present to the nation of Osborne House and the surrounding magnificent estate. For this purpose a special Act of Parliament was passed entitled "The Osborne Estate Act," or 2 Edward VII., c. 37. In this it is related that the Osborne estate was left by the late Queen to His Majesty for life, but that with the approval of the Prince of Wales the King had expressed his desire that on the occasion of his Coronation the Osborne estate should be made over and become a part of the public property of the Sovereign. Further, it was enacted that provision should be made so that the house and gardens might be used as a memorial to the late Queen. Only a certain small portion of the estate was reserved for the private use of members of the Royal family. Osborne House and the adjacent grounds were therefore placed under the management of the Commissioners of Works and the rest of the estate under the Commissioners of Woods. The Act further directs that:—

> As a memorial to Her late Majesty the Commissioners of Works—(*a*) shall, during His Majesty's pleasure, preserve, so far as may be in its present condition, and keep open to the public in such manner and on such terms as the Commissioners, with the approval of His Majesty, determine, such part of Osborne House as appears to have been in the personal occupation of Her late Majesty; and (*b*) shall devote the rest of Osborne House and the grounds under their management to be used for the benefit of officers of His Majesty's naval and military forces or their wives, widows, or family.

Here then were a vast building and estate placed at the disposal of the nation and the chief concern was that of making the best use of this Royal largess. A part of Osborne House could be preserved as a sort of museum where visitors might see the Victorian style of decoration. This consists of the council chamber, the dining room, drawing room, and the Durbar Room, together with other apartments which were constantly used by the late Queen. The greater part of the building, however, consisting of the rooms and apartments utilised for the Royal suite and visitors, would afford no special interest to the public and it was proposed that it should be so altered as to be available for the purposes of a convalescent home.

There still remained close at hand the stables and the cricket grounds and it was felt that others besides the convalescents should profit by this vast estate. It was therefore determined to create on this spot a naval college. With great promptitude a series of elegant pavilions have been constructed which already contain 198 cadets of the Royal Naval College and eventually there will be accommodation for a total of 375 cadets. These buildings have been erected by the Office of Works at the expense of the Admiralty. It will help to build up the health and strength of these young pupils to give them the run of this fine estate. The same, it is to be hoped, will be the effect of the situation on the convalescents who will live close by at Osborne House. The site of this building is admirable. It is on the highest elevation of the neighbourhood and is swept by the sea air from all sides. At Osborne House a commanding view of the sea can be obtained and the grounds extend to the shore where there are a beach and a sea wall within the estate. That the climate is exceptional is shown by the vegetation, for, among other trees, the cork oak flourishes here and in an extraordinary manner and early in January I found some Mediterranean heather in full bloom.

Those who know Osborne House will remember that the main building forms three sides of a square to which, however, several wings and out-buildings have been added from time to time (Fig. 1). Facing the main entrance there are on the left the apartments of the late Queen and the Durbar Room, which on certain days will be open to the public. These are sufficiently separated by a broad court from the right-hand side portion of the building where the convalescent home will be established. This part of the building is well suited for the purpose. There are three floors and two wings. The end of these wings communicates, on one side, with a passage and parallel with the passage is a terrace or colonnade that overlooks the main yard or court of the principal entrance to Osborne House. On the third floor these wings communicate with an open terrace formed by the roof of the sheltered colonnade which corresponds with the second floor. Thus without leaving the building or descending the stairs the patients can be wheeled out or can walk out into the open air. On the second floor the open air can be enjoyed when it is raining, for the colonnade is very broad and affords ample shelter (Fig. 2). This is a convenience that will not fail to be of special service to the patients. As for the rooms, it has been necessary to make very extensive alterations. Some rooms were too large and others were too small so that the position of the partition walls had to be changed. Then the paper from the walls had to be removed, together with some useless and dust-absorbing ornamentation. The walls are now treated with velour paint that can be washed and kept thoroughly clean. Light pleasant colours have been selected: a soft green for the third floor, light blue for the second, and strawberry and cream for the first floor. While the walls and size of the rooms were thus modified, all the old-fashioned and extravagant smoke-producing and coal-wasting grates were removed and Tropican grates were substituted throughout. Moreover, all the closets had to be reconstructed, every soil-pipe removed and replaced, and the entire drainage system planned anew and re-laid. In connexion with this bath-rooms had also to be provided and there are now four bathrooms on each floor. An iron staircase has been built at the extremity and outside each wing so as to provide a means of escape in case of fire. At the other extremity of the wings there are the terrace and the colonnade gallery. But over and above these precautions there is a huge tank at the top of the kitchen stairs provided with a fire hose and this will supply a full flow of water for 15 minutes. In that period of time the stationary steam fire engine can be made to work and would throw water over the whole building. Each room is provided with a telephone suspended near to the bed and a night emergency bell.

The furniture has been especially devised by Mr. Bailey of the Office of Works with the advice of Miss McCaul,

FIG. 1.

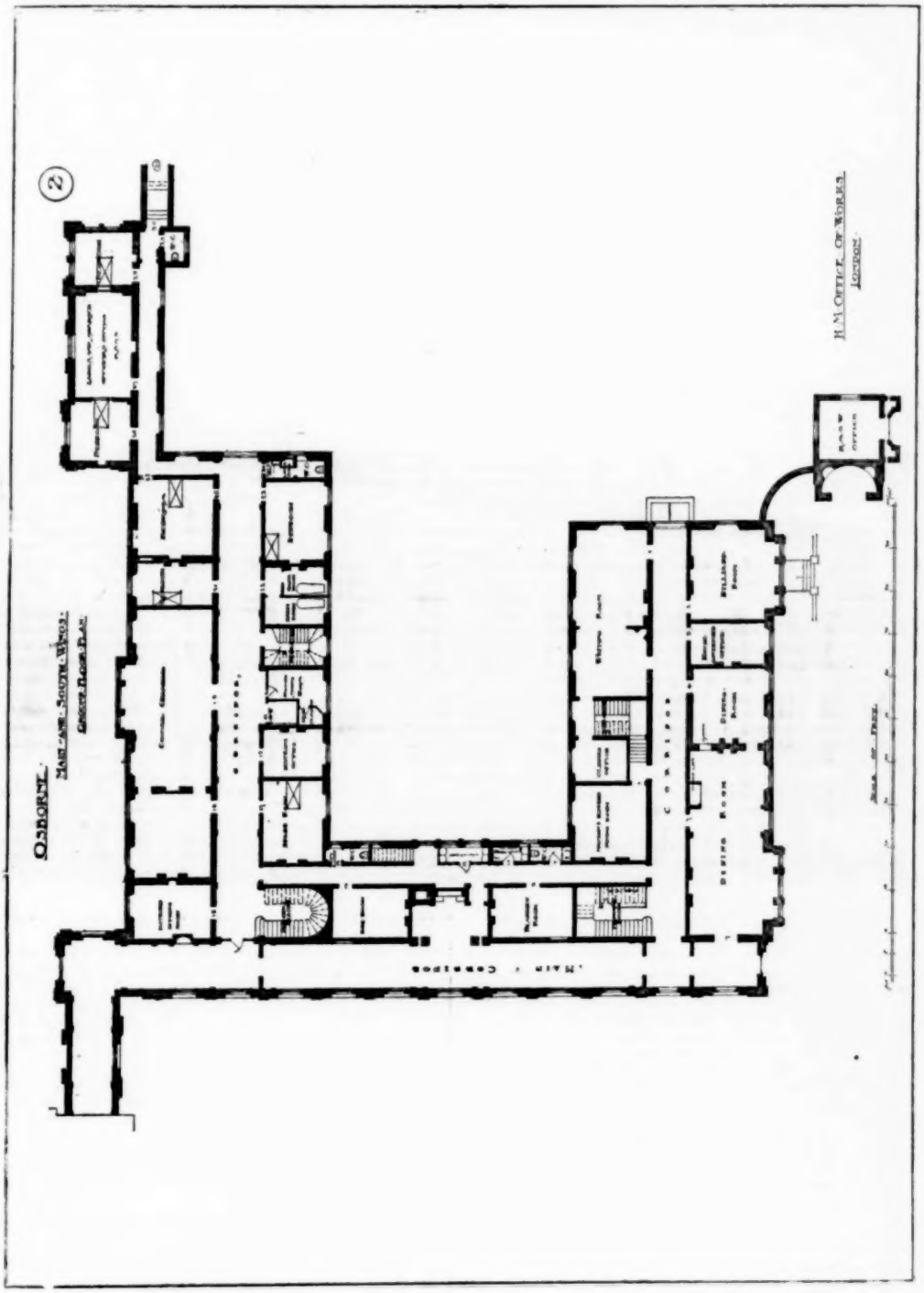

OSBORNE.
H.M. OFFICE OF WORKS.
MAIN CORRIDOR
CORRIDOR
DINING ROOM
BILLIARD ROOM
SMOKE ROOM

FIG. 1.

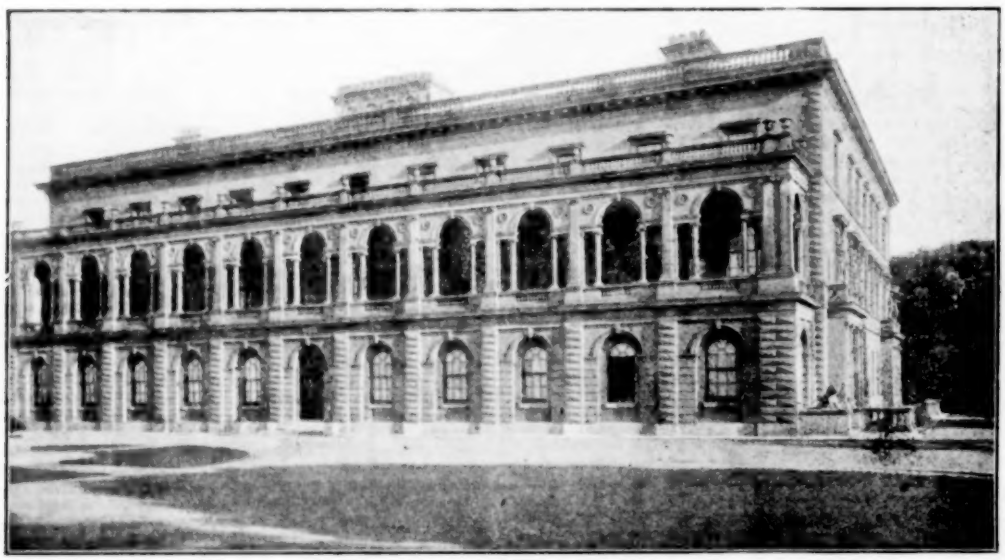
R.R.C., so as to be as aseptic as possible. Vare's enamel white paint is used throughout. This has been carefully analysed and contains no lead whatever. The furniture is enamelled inside, outside, and underneath so that the absorbent pores of the wood are closed everywhere and washable surfaces exist on all sides. No angles are allowed; all is rounded off inside the chests of drawers, the wardrobes, &c., as well as outside. For the night tables the back has only bars of wood, the door in front having an open space at the top so that the air passes through freely. This furniture is really remarkable. It is none the less elegant and cheerful in appearance because all these sanitary precautions have been taken in its construction. Something similar should be used in hotels and other much frequented places. The Victoria hall has been converted into a smoking and music room. There are here an organ and a library. There will also be a piano but the room is well away from the rest of the building so that the noise or music will not disturb the patients in their bedrooms. In summer the windows on the sunny side can be closed and shaded, while the door-windows on the other side open out on to the terraced gardens which will be preserved for the private use of the patients. These beautiful terraces constitute one of the most charming features of the estate and will be a great boon to the enfeebled who need some brightness, fresh air, and a little exercise within immediate proximity of their rooms. Near at hand there is a drawing room reserved especially for ladies. In the other wing there are a billiard room and a large and a small dining room. This wing does not overlook the sea or open on to the terraced gardens but it faces the south, receives the sun's rays, and gives access to the park with its splendid trees.

The general impression is that of vastness—a large palatial building; lengthy, broad corridors; lofty rooms, many of them much larger than necessary. Then there is the grand stretch of park and sea, of lawn and shrubberies, with majestic trees that stand like an army round this Royal retreat to break the force of hostile winds and to provide friendly shade and protection. Among all this foliage and the numerous evergreens there is a great variety of birds, while below almost any plant will grow. Thus the naturalist will find much to interest him and this may help many to pass time agreeably in the open air. The one objection is due to the too frequent rains and the consequent dampness and mist. But here again there is the advantage that Osborne House was built with extraordinarily thick and solid walls, so that it can well cope with these climatic disadvantages. Also, being situated on an elevation the air is bracing, and for those who can take exercise further healthy relaxation may be obtained on the neighbouring golf course, while there are 28 miles of good road for cycling.

The accommodation which the convalescent home at Osborne will afford is to be divided as evenly as circumstances permit between the navy and the army. There will be 38 rooms for single convalescents and five sets of two rooms or room and dressing room for married couples. Further, there is a spare bedroom where a near relative of any of the patients might stay as a visitor in a case of emergency. For admission the officers must be recommended by the Director-General of the Medical Department of the Royal Navy, subject to the approval of the First Lord of the Admiralty, and by the Director-General of the Army Medical Service, subject to the approval of the Secretary of State for War. Commander Powell, R.N., has been appointed house governor and will reside on the estate. The inmates of Osborne House will be provided with fuel, light (electric), and attendance, food, and such stimulants as the medical officer may consider to be absolutely necessary for the treatment of the case and shall order. A stoppage of 2*s*. 6*d*. a day will be made for single men and 5*s*. for married couples. No children, officer's servants, or dogs will be allowed. Efficient service will be provided and there will be a staff of trained nurses. But there is a rule that no gratuity shall be given to any person employed at Osborne House under the penalty of dismissal, so that the only expense incurred will be the payment of 2*s* 6*d*. a day. Yet breakfast, lunch, afternoon tea, and late dinner will be provided, together with medical attendance, such special invalid food and medicaments as may be needed, baths, and ample opportunity for outdoor exercise and whatever relaxation may be pleasant provided that it is not injurious.

There can be no doubt that King Edward VII. has earned the gratitude of his subjects by his kind and timely action. By establishing the Osborne Convalescent Home for officers of his navy and army he has also provided a monument in honour of his late beloved and gracious Mother which is in entire consonance with the traditions of her long and beneficent life and reign.

FIG. 2.



View of the building showing the verandah and the open promenade on the second floor.

SOME POINTS CONCERNING NATURAL MINERAL WATERS IN GENERAL AND APOLLINARIS WATER IN PARTICULAR.

WE have before discussed the question of the therapeutic superiority of natural mineral waters compared with those artificially prepared. The results of quite recent investigations, the discovery of the fact that the Bath and Buxton thermal waters, for example, are radio-active, may possibly lead to a more satisfactory explanation of the favourable action of natural mineral waters in hydrotherapy. In previous articles[1] upon the subject attention was drawn to the fact that the effects of the salts in natural mineral waters are such as cannot be obtained from any artificial imitation of them. Possibly the fact that a natural water containing certain salts in certain proportions acts more favourably than does a water to which salts in the same proportions have been artificially added may be accounted for in some way by the newly discovered property, radio-activity, which is in all probability possessed by all natural waters in a more or less degree. On the other hand, it has been surmised that natural waters contain mere traces of many salts which are not present at all in artificial waters and which may possibly exert important beneficial effects upon the body. There is, again, the question of the formation under immense pressure in natural waters of double salts which have a different effect from that of the salts taken separately, their absorption in the single condition being less certain than when in the coupled state. Thus it has been shown that when a natural water was given more mineral matter was absorbed in a definite time by the intestine of a dog than was the case when artificial water of the same composition was similarly exhibited. Whatever may be the correct explanation, the fact that natural mineral waters act more favourably than do the artificial preparations is of decided importance and the discovery of a means of differentiating the one from the other would be a gain to medical science.

For some time past sinister suggestions have been made as to the origin of certain so-called natural table mineral waters imported into this country and in particular in regard to one of the best known—viz., Apollinaris water. Laymen and medical men alike, if they have not shared the view, have often heard it expressed that the Apollinaris spring was a mythical entity and that the water sold in this country was a manufactured article. This suspicion developed until it culminated in a very definite action being taken by a certain section of the mineral water trade some months ago in the form of a summons which charged the Apollinaris Company with the offence under the Merchandise Marks Act of selling its bottled water with a false trade description.

The case proved of considerable public interest and the proceedings were watched by many eager to know the truth about Apollinaris water. The false description which was complained of was said to be contained upon the label which appears upon the bottle describing the water as "Apollinaris natural mineral water," with a picture of the spring bubbling up, and the representation contained thereon that the water was a natural mineral water. Evidence was given purporting to show that so far from Apollinaris (in bottle) being a natural mineral water bottled as it comes from the spring it was, in fact, to all intents and purposes, an artificial manufactured article. In support of these statements the processes of manufacture necessary for the bottling of the water and its preparation for sale to the public were described. In the end the magistrate decided that the prosecution must fail and he thought that it would be wholly misleading to class this product among artificial mineral waters. The summons was therefore dismissed and the case was afterwards taken to the High Court of Justice, with the result that the Lord Chief Justice said that it was quite impossible to interfere with the judgment of the magistrate. "I understand," his lordship observed, "that the water and the combination of it with the carbonic acid gas is the same when supplied to the public as it is when it is drawn up from the spring." The appeal was dismissed.

[1] THE LANCET, July 12th, 1902, p. 94; Dec. 5th, 1896, p. 1622; August 8th, 1891, p. 307.

It is of interest to inquire into the facts upon which so important and definite a conclusion was based. The evidence purporting to show that, so far from Apollinaris water being a natural mineral water bottled as it comes from the spring, it is in fact to all intents and purposes an artificial manufactured article, was based on the following brief account given by counsel as to the processes adopted at the Apollinaris spring for the bottling of the water before its exportation and sale to the consumer: (1) the pumping of water into open tanks in which, after the addition of a small quantity of salt, it was left exposed to the air in order to precipitate the trifling quantity of iron in the water; (2) the addition subsequently of carbonic acid gas obtained in the neighbourhood of the spring; and (3) the bottling of the water under a pressure equal to three or four atmospheres of this carbonic acid gas.

That is a brief statement of the case which, however, necessarily omits certain important details that if not taken into consideration might lead to an erroneous inference. This statement omits certain particulars as to those important steps in regard to the preparation of the water for sale which have given rise to considerable contention—steps which if not observed would put an end altogether to the supply of bottled natural aerated mineral water to the public from any naturally effervescent spring. The actual position can, in a word, only be appreciated by making a personal inspection of the spring and of the processes of bottling, and by submitting samples taken at various points to perfectly independent analysis. We have considered it of interest, bearing in mind the scepticism which has existed, to institute such an independent inquiry ourselves. We therefore instructed one of our Special Commissioners to visit the spring (and it may at once be said that the spring is at all times open to the inspection of any medical man who cares to visit it himself; moreover, a public highway intersects the property), to describe all he saw, to take samples where and whenever he considered expedient and germane to the aim of the inquiry, and subsequently to submit these samples to analysis and to compare the results so obtained with the analyses of samples of the water purchased in the open market. It may be stated that the company not only gave our Commissioner permission to visit the springs and to enter the bottling sheds and every place connected therewith when he chose, but afforded also every facility in order that the inquiry might be made as complete as possible.

The Apollinaris spring is situated in the valley of the river Ahr which flows into the Rhine on the left bank about midway between Bonn and Coblentz. The Ahr valley bears signs of past volcanic disturbances and there are several springs in its vicinity which are not only gaseous but thermal. Neuenahr, close to the Apollinaris spring, is a rapidly rising health resort, with a very complete equipment of appliances available for modern balneological practice. There are also the usual provisions for the accommodation of visitors at a watering place—hotels, winter-gardens, concert-room, pump-room, &c. The railway to Neuenahr leaves the main line on the left bank of the Rhine at Remagen, close by the Apollinaris Kirche. The distance is about six miles from Remagen. Beyond Neuenahr is a very beautiful valley up to Altenahr by way of Ahrweiler and Walporzheim, both the railway and road passing through a very fertile vine district and very good wine is produced there. The Apollinaris spring itself is situated in the midst of vines, and, indeed, its discovery in 1851 was due to the observation that in a certain spot of the vineyard the vines refused to grow and died, and a black patch resulted which proved to be due to the escape of large quantities of carbonic acid gas from the earth. Upon excavating the earth eventually a spring was found giving off gas and it is this spring which has yielded ever since a plentiful supply of gas and water both of entirely natural origin sufficient to keep pace with the enormous demand that the popularity of Apollinaris water has entailed.

It is a remarkable fact that in spite of the enormous drain to the extent of 30 million bottles per annum upon this spring it shows no signs of being exhausted. Our Commissioner was able to observe the effect of the level of the spring when very large volumes of the spring water were being bottled. Any perceptible lowering of the level by an excessive demand is rapidly compensated and the yield of gas is far in excess of the requirements. The spring cannot be approached without first thoroughly ventilating the space within the walls which surround it. As the steps to the spring are descended a curious sensation

of warmth is experienced, first by the feet, then by the legs, until it is not wise to descend lower into the lake of heavy gas. The smoke from an extinguished match floats upon the gas, the depth of which is several feet. By slowly lowering a lighted match the exact level of the gas lying over the spring can be ascertained by the flame being suddenly extinguished. The actual source of the water is unknown and can only be a matter of speculation; suffice it to say that it is quite warm and in cold weather clouds of vapour arise from it. The actual temperature proved to be 20° C. Apollinaris water may thus be classed as a thermal water. The water is drawn at a depth of 50 feet from the surface and the gas is collected at the top in a large bell-jar on the same principle as that of a gas-holder at the gas works but on a smaller scale. On its way to the tanks the water receives a slight addition of common salt. What this addition amounts to in practice will be found from a consideration of the results of analyses made in THE LANCET Laboratory of the water taken directly from the spring and of the water after it has received this addition.

The water, which is perceptibly warm, is next run into tanks of which there is a great number. Here it is allowed to be at rest for several days, generally a week. On its introduction into the tanks the water cools and by unavoidable contact with the air absorbs oxygen; a small portion of the iron normally present in the water is oxidised into hydrated oxide of iron which separates in the form of a fine rust-coloured sediment. At the same time a slight film of carbonate of lime forms on the surface. The tanks are covered with screens to keep out dust. At the end of seven days the water is ready for re-uniting with the gas from which, to a considerable extent, it parted company deep down in the spring. It is drawn off perfectly clear and bright and pumped into the carbonators which are heavily lined with the purest block tin. Pure block tin, it may be remarked, is the only metal with which Apollinaris is ever allowed to come into contact during the bottling process. In the carbonators the water and the gas are blended and the partnership which existed between them in the spring is thus re-established. The gas is pumped directly from the spring into vertical cylinders where it is kept at a pressure of about three or four atmospheres. The carbonators are provided with paddles which beat up the gas and water. After carbonation is complete the water with its three or four atmospheres of gas passes to the bottling machines. The gas is so pure in its natural state that it undergoes no treatment whatever; purification would be superfluous and this is borne out by the results given on analysis. At intervals the gas previously to being discharged into the carbonators is tested and a record is carefully kept of the results which show that the proportion of carbonic acid gas is on an average within a few tenths of 100 per cent. The composition of the gas is remarkably constant. Similarly the gas given off by a bottle of the water taken directly from the bottling machines is regularly tested as to the proportion of CO_2. Here again the percentage of pure carbonic acid gas is only short of 100 by a few tenths which consist in the main of air which it is impossible to eliminate entirely during the bottling process. Air adheres to the walls of the bottle in spite of the care taken to remove it by sweeping it out with gas before filling with water. Corking, wiring, capsuling, and labeling complete the process and there is little more to be described. The bottling sheds are very large and the bustle and noise within them at a busy time are considerable. There are some 700 hands employed there.

On several occasions when our Commissioner visited these sheds the quantity of water being bottled was equal to 90,000 bottles per diem. In the summer this daily quantity is doubled. The utmost care is taken to preserve the cleanliness of the water; the corks and bottles are scrupulously cleansed and submitted to several processes before they are consigned to the filler and every bottle is carefully examined in a very strong light before it is ready for labeling and packing. Similarly, care is taken with the stone jugs before being filled with Apollinaris water; the operation of filling and corking the stone jugs is slightly varied owing to the opaqueness of the stoneware. The jugs are completely filled with the water under pressure and then a wooden plug is inserted which displaces a volume of water sufficient to allow room for the cork and a little more besides for the expansion of the water. Necessarily some gas is lost during this process. As a rule the water keeps cooler in the stone jugs and is largely protected from the influence of light and heat.

So far the following important facts have been ascertained in regard to the bottling of Apollinaris water: (1) the water of the spring itself is bottled; (2) the gas is the natural gas of the spring; and (3) the supply both of gas and of water is abundant and in spite of the enormous number of bottles filled day by day there is no evidence of this supply diminishing. As a matter of fact, the natural supply of both water and gas is considerably in advance of present demands.

We may next consider the steps which are employed in connexion with the bottling of the water and which are deemed necessary in order that the water may reach the consumer in a satisfactory condition. The mineral ingredients of Apollinaris may be taken to be the same in nature and amount whether the water is drawn deep down or just below the surface. The amount of carbonic acid gas dissolved in the water, however, will obviously vary according to the depth from which it is taken, or, in other words, to the pressure. That there is a superabundance of gas in the spring is patent from the enormous volume that escapes at the surface. This disengagement of gas at the surface merely means release of pressure, so that while the water at the top would only contain its own volume of gas (the point of saturation at the atmospheric pressure) that down below would contain as many more volumes according to the increased depth. In fact, a pint of Apollinaris water drawn from near the surface contains, we found, barely a pint of gas, but the volume of dissolved gas increases as the columnal pressure is greater until about 50 feet down the pressure is equal to two and a half atmospheres. This has been ascertained by experiment in which a bottle was sunk to that depth and then closed by a mechanical device acting upon a metallic cork. The bottle was then brought to the surface. On releasing the cork the gas rushed out of the water with brisk effervescence, just as when a cork is withdrawn from a bottle of soda-water. It is clearly not practicable to bottle a natural mineral water on anything like the large scale occasioned by public demand in the manner described in this experiment and so water and gas must be temporarily separated and brought together again as nearly as possible at the same pressure. The water is drawn from a depth of 50 feet and subsequently it is re-united with gas at a pressure corresponding with that known to exist at this depth in the spring. So far as the relationship of gas and water is concerned, therefore, it is the same whether it is the water in bottle at a pressure of two and a half atmospheres or in the spring under a columnal pressure of water at 50 feet plus one atmosphere.

But, as has been indicated already, the water during storage develops a very slight sediment on exposure to air which is due to the oxidation of the salts of iron and subsequent separation of ferric hydroxide. If Apollinaris water direct from the spring were placed in a bottle and corked this change would be inappreciable, and in fact the system of storage has not so much for its object the separation of traces of iron as to provide a sufficient volume of the water for bottling purposes. Otherwise there is no reason why the water should not be put in the bottle straight from the spring. A few specks of iron would be found adhering to the bottle, the water itself would be quite clear, and, as a matter of fact, the composition of the water of the spring is not appreciably affected by this system of storage.

The bottling of Apollinaris water, however, entails a precautionary measure which alters, though only slightly, its composition in one respect. We refer to the addition of salt, the amount added over and above that normally present in the spring being one gramme per litre, as will appear from the difference between the results of our analysis, as regards salt, of the water direct from the spring and of the bottled water or the water as it leaves the tank. There is only one reason, and that a very good one, for adding this small quantity of salt to Apollinaris water prior to bottling. The addition of salt is found necessary in order to provide against the decomposition of the sulphate of sodium. In contact with a bad cork and in warm climates some reduction of the sulphate to sulphide is apt to be effected and the gas acting upon sulphide would set free sulphuretted hydrogen which would of course impart an objectionable taste to the water. By adding one gramme of salt per litre, or about nine grains to the pint, the water is preserved from undergoing this change. The salt used for this purpose, as our analysis shows, is of the purest description. The small quantity used does not affect the taste in the smallest degree; a difference in taste would be perceptible between pure distilled and distilled water containing a small quantity of common salt, but in a water containing carbonate of sodium, magnesium, lime,

and already some common salt and supersaturated with gas the addition of salt in this proportion makes no difference at all to the taste. The development of sulphuretted hydrogen though not the rule is an exception (occasioned perhaps by a defective cork or by warm weather, or most probably by both) which has to be provided against. Formerly the corks were salted but that only led to inconsistencies in the composition of the water and also the preservative effect desired was not always gained, whereas by adding a perfectly definite though quite small quantity of salt to the water a uniform result was obtained and according to a number of analyses which we have made of Apollinaris water purchased from different places the quantity of salt is remarkably constant. To sum up, Apollinaris reaches the public in a condition slightly different from the water at its source in two unessential respects which refer not to the water and the gas, which are both absolutely the natural products of the spring but to the mineral constituents. One constituent is partly eliminated during storage and another is put in which slightly augments the amount already normally present. The other constituents remain perfectly intact. Before bottling iron is deposited and salt is added to the extent that the amount normally present in the water direct from the spring—namely, 0·4212 gramme per litre—is increased to 1·4212 grammes per litre (or from three and a half grains to 12½ grains per pint). The exact way in which a small addition of salt thus effectually prevents the reduction of sulphates to sulphides is not known but the decomposition does not occur in mineral waters containing sulphates in which the amount of salt naturally present is over one gramme per litre. The Apollinaris Company has always published this simple means of protecting Apollinaris water from this risk.

Analysis of a sample taken directly from the spring at Neuenahr by our Commissioner gave the following results:—

ANALYSIS NO. 1.

Silica	0·080	grammes per 10 litres.
Iron	0·090	,, ,,
Sodium chloride	4·212	,, ,,
Sodium carborate	12·213	,, ,,
Sodium sulphate	2·800	,, ,,
Calcium carbonate	2·450	,, ,,
Magnesium carbonate	4·875	,, ,,
Total saline constituents	26·720	

To these results may be added the following as exemplifying the excellent sanitary state of the water:—

Free ammonia	0·0224	grains per gallon.
Albuminoid ammonia	0·0028	,, ,,

The water taken directly from the spring is absolutely sterile, yielding no growth whatever when sown on suitable nutrient media. The residue gives no sign of containing objectionable organic matter and on ignition does not carbonise in the slightest degree.

The opportunity was taken whilst our Commissioner was at Neuenahr of committing to evaporation on the spot 20 litres of the water taken directly from the Apollinaris spring. In this way a residue of salts was obtained weighing, after being dried at 100° C., exactly 54·101 grammes, which is equal to 27·050 grammes from 10 litres, a number that will be seen to be in close agreement with that recording the total saline constituents in Analysis No. 1, which was conducted in THE LANCET Laboratory. The salts so obtained were finely powdered and intimately mixed and submitted to analysis and the following results expressed in parts by weight per cent. were obtained:—

ANALYSIS NO. 2.

Percentage Composition of Salts from 20 Litres.

Silica	0·90
Iron	0·70
Sodium chloride	15·93
Sodium carbonate	46·65
Sodium sulphate	10·35
Calcium carbonate	9·00
Magnesium carbonate	16·47
	100 00

The indication for lithium was distinct, though subsequent examination showed the amount to be small. There were present also traces of bromine, strontium, and arsenic. In spite of the small quantity of lithium present this metal was detected in every sample of Apollinaris water examined, including bottles purchased at different shops in London.

The next sample was taken from a tank into which the water direct from the spring and slightly warm was being discharged after the addition of salt:—

ANALYSIS NO 3.

Iron	0·008	grammes per 10 litres.
Sodium chloride	13·700	,, ,,
Sodium carbonate	13·144	,, ,,
Sodium sulphate	2·660	,, ,,
Calcium carbonate	1·850	,, ,,
Magnesium carbonate	4·280	,, ,,
Total saline constituents	35·842	

As will be seen from a comparison of Analysis No. 1 the amount of salt is increased to an amount identical with that subsequently shown to exist in the bottled water. The salt is added in the form of a solution and according to our analysis the salt so dissolved is practically pure sodium chloride. The analysis was as follows:—

ANALYSIS NO. 4.

Sodium chloride	99·562	per cent.
Calcium chloride	0·183	,,
Sodium sulphate	0·255	,,
	100·000	

It thus contained over 99½ per cent. of pure chloride of sodium and is beautifully clean, white, and crystalline.

The next analysis refers to the sample taken from the tank after an exposure to the air of seven days:—

ANALYSIS NO. 5.

Iron	Trace.	
Sodium chloride	13·740	grammes per 10 litres.
Sodium carbonate	13·140	,, ,,
Sodium sulphate	2·860	,, ,,
Calcium carbonate	1·450	,, ,,
Magnesium carbonate	4·610	,, ,,
Total saline constituents	35·800	

The tank contained about 12,000 litres of water and after emptying it a trifling deposit was scraped on the walls and floor which was found to weigh when dried at 100° C. 0·402 gramme. Its percentage composition is given below.

ANALYSIS NO. 6.

Moisture	4·00
Water of hydration	12·68
Silica	2·90
Iron	43·40
Calcium carbonate	35·90
Magnesium carbonate	0·84
Arsenic (As_2O_3)	0·12
Phosphoric acid (P_2O_5)	0·16
	100·00

It is interesting to notice that the iron carries with it during precipitation a distinct but minute quantity of arsenic. Roughly speaking, however, this deposit consists of one half oxide of iron and one half calcium carbonate. This represents all that is eliminated from Apollinaris water during seven days' storage in the tanks. The quantity per litre amounts to about 0 0335 gramme of ferric oxide and carbonate of lime or three-tenths of a grain per pint.

The following analysis was made of the water bottled and taken straight from the filling machine:—

ANALYSIS NO. 7.

Iron	Slight trace.	
Sodium chloride	13·747	grammes per 10 litres.
Sodium carbonate	12·062	,, ,,
Sodium sulphate	2·560	,, ,,
Calcium carbonate	2·250	,, ,,
Magnesium carbonate	4·881	,, ,,
Total saline constituents	35·500	

These results express the composition of Apollinaris water as it comes upon the table and it will be seen that except as regards iron (of which the amount was hardly perceptible) and salt the results are practically identical with the analysis

(No. 1) of the water taken from the spring. The amount of salt occurring naturally in the water is 4·212 grammes, while the amount in the bottled water ready for export is 13·747 grammes per ten litres, a difference of 9·535 grammes of salt, which represents the amount added for preserving purposes.

Subsequent analysis of Apollinaris water bought in the shops proved it to contain practically the same amount of salt which, in fact, varies within very trifling limits. On the whole, the results of analysis in regard to salt may be said to be remarkably constant in the case of the whole of the samples examined.

The total quantity of gas found in one bottle of Apollinaris water was found to be approximately three times the volume of water. Thus, a bottle containing 740 cubic centimetres of water gave off at ordinary temperature and pressure 1320 cubic centimetres of gas. Since one volume of water holds one volume of carbonic acid gas in solution at one atmosphere pressure the total gas in this case would amount to 740 cubic centimetres (in solution), 1320 cubic centimetres (discharged)—i.e., a total of 2060 cubic centimetres, or a volume nearly three times that of the water, which is exactly the quantity of gas contained in the water of the spring at a depth of 50 feet—that is, where the pressure (columnal and atmospheric) is equal to three atmospheres.

Two different samples of the gas gave respectively the following results on analysis:—

(1) 99·50 per cent. CO_2.
(2) 100·00 ,, ,,

Analyses were also made of the gas discharged from several bottles of Apollinaris water obtained in London and the following results were ascertained:—

99·60 per cent. CO_2.
99·75 ,, ,,
99·50 ,, ,,

The residue of gas, amounting on the average to about ½ per cent., contains air and possibly also argon and the rarer gases.

Recent investigations would appear to show that all natural mineral waters which evolve gas are radio-active. If that proves really to be the case and the radio activity is found to be permanent we may hope to possess some means of determining whether a given mineral water is a natural or artificial preparation. Experiments in this direction in regard to Apollinaris as well as upon the point of the possible presence of helion and other rare gases would be of considerable interest.

It only remains to add the analyses made independently in THE LANCET Laboratory of various samples of Apollinaris water obtained at different places in London. They serve to show the constancy of composition of the water wherever it is obtained and that it is identical with the water taken directly from the spring by our Commissioner except, as already stated, in regard to a trifling quantity of iron lost during storage in the tanks and an addition of salt (0·1 per cent.) which is advisable in order that the condition of the water at the spring may be preserved.

ANALYSES OF SAMPLES PURCHASED AT DIFFERENT SHOPS.

	(1)	(2)	(3)
Iron	Slight trace	Slight trace	Slight trace
Sodium chloride	13·800	13·680	13·510
Sodium carbonate	13·640	12·190	12·914
Sodium sulphate	3·016	2·895	2·852
Calcium carbonate	2·000	2·100	2·500
Magnesium carbonate	5·030	5·030	5·024
Total saline constituents (grammes per 10 litres)	37·486	35·895	36·800

Lithium was detected in every sample examined and the following results in regard to saline and albuminoid ammonia are interesting in indicating that the water undergoes no departure from its admirable state of organic purity at the spring during the process of bottling and exportation.

	Water direct from spring (grains per gallon).	Water purchased in London (grains per gallon).
Free ammonia	0·0224	0·021
Albuminoid ammonia	0·0028	0·0042
Nitrogen in nitrites and nitrates	*Nil.*	*Nil.*
Residue on ignition	No charring.	No charring.

In conclusion it is difficult to suggest, in the face of the facts just recorded and of the experience which has decided upon the adoption of the methods of bottling Apollinaris which we have described, how those methods could be altered with any possible advantage to the public or how any modification of those methods would enable the public to receive the water in a condition more natural than it is. As a matter of fact Apollinaris water is bottled in such a way that the natural equilibrium of the water and its complement of gas at a depth of 50 feet in the spring are preserved in the bottle for public use. Both water and gas are absolutely the natural products of the spring and the composition of the bottled water is, according to our analysis, always the same and without any appreciable variation in the mineral constituents. Some portion of a useless constituent, in the form of oxide of iron (the total amount in the water being quite minute) separates from the water prior to bottling but a useful constituent, in the shape of a small quantity of salt, is added to augment the amount of salt already naturally present in the spring in order to prevent the possible decomposition to which the sulphate of sodium of the water is occasionally liable. The taste of the water in bottle is identical with that of the water taken directly from the spring. Apollinaris water has a peculiar soft flavour which is due not to common salt at all but in part to the alkaline carbonates which neutralise the acids in the mouth, and in part to the natural state of combination of the mineral ingredients. As Professor Oscar Liebreich has said, "even the best manufactured artificial mineral waters differ from the natural ones in taste and value." There is nothing disclosed in our analysis of the bottled water which is not found in the water at the spring. In view of these facts which we have taken some trouble to ascertain for ourselves, it seems to us that the recent decision of the Lord Chief Justice that Apollinaris water is entitled to the description of a natural mineral water is in accordance with both law and common sense.

We may add that our analyses and observations are in substantial agreement with those given at various times by the late Professor Virchow, Professor Bischof, Professor Liebreich, Professor Mohr, Professor Hofmann, Professor Kekulè, Professor William Odling, and the late Sir Edward Frankland.

THE RETIRING AGE FOR PROFESSORS, PHYSICIANS, AND SURGEONS.

IN his presidential address to the Congress of American Physicians and Surgeons,[1] held at Washington on May 12th, 13th, and 14th, 1903, Professor W. W. Keen makes the following remarks on an age limit for college professors and hospital physicians and surgeons which in view of the leading article published in THE LANCET of Jan. 16th, p. 169, we think will be of interest to our readers:—

"One of the difficult questions which boards of trustees have to face is whether there shall be a fixed age at which a college professor or a hospital physician or surgeon shall retire from the active duties of his post. I firmly believe that they should fix such a retiring age in the interest of the students and the patients. As age advances a man's opinions and his practice become 'as petrified as his arteries.' He is incapable of constant study, of adding to his knowledge, or of keeping up with the feverish strides of medicine. He ought then to be relieved of his cares and his duties. If no rule exists he is allowed to continue his inefficient or even disastrous work or by some harsh suggestion is compelled to give place to another more competent man. A rule is a condition accepted when he is appointed, and just as in the army and navy when an officer reaches 64 or 62 years of age, he is retired on reduced pay, and because it is a rule he does not feel hurt or humiliated; so, in a college or hospital, when time and the rule bring us to the period when we must gracefully retire no one's reputation is injured or his feelings lacerated.

"I have ascertained that the following rules are in force in some of the larger institutions:—

"At Harvard the age when a professor may request to be

[1] The Duties and Responsibilities of Trustees of Public Medical Institutions, being the presidential address delivered to the Congress of American Physicians and Surgeons, 1903, by W. W. Keen, M.D., LL.D., F.R.C.S. (Hon.), Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia (Transactions of the Congress, p. 232).

retired is 60 years, provided he has been in the service of the University for 20 years with a reduced pay ranging from one-third to two-thirds of his salary. At 66 years of age he may be retired by the President and Fellows partly or wholly. The details of the plan are admirably arranged.

"At Chicago, while no plan is yet in force, largely, I presume, because of its recent establishment on the present basis, such a plan will soon be made operative.

"At Columbia the retiring age, after 15 years of service, is 65 years, either at the request of the professor or upon motion of the trustees, and on half pay.

"At Yale the retiring age is 65 years after 25 years of service and on half pay, but the retirement is not compulsory. It will probably be made compulsory before long.

"At Cornell the retiring age is 70 years, but the Pension Fund will not be available until 1914. The retiring pension will then be $1500.

"At the University of Pennsylvania and at Johns Hopkins no retiring age is fixed.

"The only hospitals I know of in which a retiring age is fixed are the Massachusetts General Hospital and the Boston City Hospital. At the former the compulsory retiring age of the surgeons is 63 and of the physicians 65. At the Boston City Hospital the visiting surgeons are retired at 65 but the physicians, gynæcologists, and all the other medical officers continue in service indefinitely—a very curious anomaly.

"These varying, but in the main identical, provisions, when any exist, show the trend of thought and practice. They generally apply to the medical department, except that in case a professor is engaged in the practice of his profession, and so has a private income, the provision for continuing a portion of his salary does not apply. This is right and fair. Of course, in all hospitals where there are no salaries no provision as to reduced salary would obtain.

"The point I wish to emphasise is, however, that the age limit (which in my opinion should be 65 years) should be *compulsory* and so not be invidious in any given case. It will be objected that not a few men are in full intellectual and physical vigour at the age of 65 years and it will be a detriment to the institution to lose their services when their ripe experience and admirable teaching are most desirable. I admit it. But for every one such case of harm done by compelling a man to stop there are a score of instances of men who are doing vast injury by their inefficiency. Moreover, in the very few cases in which it might be allowable, as boards of trustees make rules they can unmake them, and in special cases they could pay a graceful compliment and preserve to the institution their exceptional men by extending the limit to 70 years. In no case can I think it wise to go beyond this limit."

MEDICINE AND THE LAW.

The Colouring of Foodstuffs.

SIX tradesmen were fined at the South-Western police-court on Jan. 21st for selling preserved peas containing crystallised sulphate of copper in varying proportions, added to them for the purpose of dyeing them a more brilliant green than they would otherwise have been. In defence it was stated that the public demanded that peas should be green and would not buy them unless they were. The obvious answer to this is that the public asks for green peas because it associates that colour with fresh well-cooked vegetables and not because it desires to absorb sulphate of copper. That the public has an unreasoning faith in certain appearances with regard to its food as indicative of good quality is well known. In London in particular it likes milk and butter coloured with anatto and bread of an unnatural and unnecessary whiteness. Jams also are readily bought of a colour which the ordinary process of cooking sound fruit with sugar could not produce. A few weeks ago evidence was given at the City of London court of a fish-dealer having recommended a retailer to "try cochineal" in order to impart to an unclean salmon the colour of a fresh-run fish. If he meant what he said to be taken seriously he must have held the opinion that the consumer would rely upon his eye rather than upon his palate.

Garbage-mongers Fined and Imprisoned.

At the South-Western police-court on Jan. 21st a man named Carl Hetzel was convicted of having pork which was unfit for human food upon his premises for the purpose of making it into sausages. He was fined £10 with costs. On the same day at the Guildhall police-court Frederick Cutting, a pig-dealer of Roper's-green, Hadleigh, Suffolk, was charged with sending eight diseased pigs to Smithfield Market. In this case the knowledge of the defendant with regard to the condition of the animals was proved by the evidence of the man who had sold them to him and to whom he had observed that they had the cramp and looked "a bit lungy." On account of their condition he had offered 50*s.* for ten, and eventually had bought nine for 53*s.* The after-history of the ninth pig was not reported. A previous conviction was proved against Cutting, after which it is not surprising to learn that he was sent for six weeks to a place where the food, if not luxurious, will be more wholesome than that which he endeavoured unsuccessfully to place upon the London market.

The Wording of the Medical Certificate of the Cause of Death.

We have received the following letter:—

To the Editors of THE LANCET.

SIRS,—I should be glad of an opinion as to the interpretation to be placed on the passage, "I hereby certify that I attended ——— during h—— last illness." Should I be justified in withholding the certificate of death in the case of a child first seen at 11 P.M. and dying at 6 A.M. the next morning and not seen a second time? The cause of death was probably broncho-pneumonia. As the child had been ill for nearly a week I can hardly be said to have attended it during the illness. I am, Sirs, yours faithfully,

Jan. 17th, 1904. AORTA.

Incidents such as that referred to above are not uncommon and the medical man has to exercise his discretion with regard to them. The words of the Act which impose upon him the obligation to give a death certificate are as follows: "In the case of any person who has been attended during his last illness by a registered medical practitioner that practitioner shall sign and give to some person required by this Act to give information concerning the death a certificate stating to the best of his knowledge and belief the cause of death, and such person shall when giving information concerning the death, or giving notice of the death, deliver that certificate to the registrar, and the cause of death as stated in that certificate shall be entered in the register together with the name of the certifying medical practitioner" (37 & 38 Vict., c. 88, section 20, subsection 2). The mere fact of the medical man seeing the patient on one occasion only during the illness from which he dies does not, according to this section, affect the matter. In the ordinary construction to be put upon the words used he "attends the deceased during his last illness," and the question for him to decide is whether he can certify "to the best of his knowledge and belief the cause of death." If the opportunity for observation has been insufficient or if the disease has remained obscure so that he neither "knows" nor has formed any "belief" upon the subject, he is not under the obligation to certify and should not do so. Doubt may occur whether he has attended during the fatal illness once or many times. In any particular case, however, it may be the duty of the medical practitioner not to certify, although the "cause of death," strictly speaking, is clear to him. He may be of the opinion that the death which has been the result of well-defined physical conditions would not have taken place but for the neglect to summon medical aid before it was too late. He may further have reason to suspect that this neglect was deliberate and that he was only summoned in order that he might certify a death into which the coroner should inquire. In the case of children parents are not always anxious that they should survive or escape illness, and it is not impossible to expose children to cold or wet so that they may become ill and their lives may be eventually in danger. It is a matter for regret that the coroner is not bound to hold an inquest on all occasions where there is no medical certificate of the cause of death, but as the law stands inquests are only for cases of "violent or unnatural death, or of sudden death where the cause is unknown." A death caused by neglect is not a "natural" death and for this reason a medical man, where he has any ground for suspecting that matters are not, to use a convenient phrase, "all right," should decline to certify and should leave the matter to the coroner, upon whom the responsibility will then rest. In all cases he must exercise his discretion, taking into consideration all the facts connected with the death so far as he is aware of them.

Salisbury v. Gould.

In Salisbury *v.* Gould, recently tried in the King's Bench Division before Mr. Justice Grantham and a special jury, Mr.

W. R. Gould, a medical man practising in Lamb's Conduit-street, successfully defended an action in which damages were claimed against him on the ground of negligence and he is heartily to be congratulated upon the verdict obtained. Mr. Gould had in September, 1901, certified a little girl to be suffering from small-pox but after she had been placed in an observation shed at Rotherhithe for three days the conclusion was formed that her condition was due to chicken-pox and she was restored to her mother. The evidence showed that, so far from treating the case with anything approaching negligence, Mr. Gould had exercised considerable caution, visiting the patient twice, on Sept. 1st and 2nd, before calling the attention of Dr. W. A. Bond, the medical officer to the Holborn borough council, to the case. Dr. Bond had then examined the patient thoroughly and it was after consultation with him and not until he had secured his approval of the step to be taken that Mr. Gould gave the certificate and the child was removed on Sept. 5th. The evidence further showed that the symptoms pointed strongly to small-pox rather than to chicken-pox. It is a little surprising to see that a medical witness was called, apparently as an "expert," in support of the plaintiff's case and according to the *Times* report of his evidence, deposed that he thought it impossible to mistake chicken-pox for small-pox, at all events after a few hours' development of the illness. The jury do not appear to have given much weight to his testimony, for after Dr. Bond had corroborated Mr. Gould they intimated that they had heard enough of the case and returned a verdict for the defendant, for whom judgment was accordingly given. In addition to this gratifying decision given by the jury Mr. Gould was also entitled to judgment in his favour under the Public Authorities Protection Act, 1893. Mr. Justice Grantham intimated that this was his view but suggested the taking of the jury's verdict as a precaution in case on appeal he should be found to be wrong. The statute referred to provides that "where any action, prosecution, or other proceeding is commenced against any person for any act done in pursuance, or execution, or intended execution of any Act of Parliament or of any public duty or authority or in respect of any alleged neglect or default in the execution of any such act, duty, or authority, the action, prosecution, or proceeding shall not lie or be instituted unless it is commenced within six months after the act, neglect, or default complained of or in case of a continuance of injury or damage within six months after the ceasing thereof." This certainly appears to cover the case of a medical practitioner certifying under the Public Health Acts, although called in to treat the patient in the course of his ordinary practice. A medical man in such circumstances has an unpleasant duty to perform and little enough to protect him from attack when through no fault of his own he lays himself open to it. It would be doubly hard if he were allowed to be at the mercy of a plaintiff several years after the event. At the same time it is not easy to see in what way the Public Authorities Protection Act afforded any practical protection to Mr. Gould. At all events it did not prevent him from being exposed to the anxiety, the expense, and the loss of time entailed by an action persevered in until the jury refused to hear any more of it.

ASYLUM REPORTS.

London County Asylum, Cane-hill (Report for the year ended March 31st, 1903).—The average number of patients resident during the year was 2139, comprising 924 males and 1215 females. The admissions during the year amounted to 323—viz., 181 males and 142 females. Of these 277 were first admissions. Mr. James M Moody, the medical superintendent, states in his report that "a considerable number of the admissions, in regard to prospect of recovery, were of much the same hopeless class as in recent years." A large proportion of those received were in an advanced state of senility or suffering from epilepsy, general paralysis of the insane, and other forms of organic brain disease. The number of patients discharged as recovered during the year amounted to 132—viz., 69 males and 63 females, or 6·17 per cent. of the average number resident. The deaths during the year amounted to 158, or 7·38 per cent. as calculated on the same basis. "This death rate is," says Mr. Moody, "below the average death rate of the county and borough asylums in England and Wales." Post-mortem examinations were made in 146 cases, or 94·4 per cent. of the deaths. Of the deaths four were due to epilepsy, seven to senile decay, ten to renal disease, 14 to pneumonia, 17 to cardiac disease, 24 to pulmonary and other forms of tuberculosis, 29 to general paralysis of the insane, and the rest to other causes. A severe epidemic of influenza prevailed in the institution towards the latter part of 1902, 26 male and 127 female patients and 31 members of the staff being attacked. A female patient (a single woman) admitted whilst pregnant was safely delivered of a male child who was afterwards removed to the workhouse. "The mother remains an inmate of the asylum." A commodious balcony has been erected in connexion with the first floor of the male infirmary whereby helpless patients can be given the benefit of open-air treatment. The Commissioners in Lunacy state in their report that the wards were found to be cheerful and comfortable, that the dormitories were clean and well ventilated, that there was an air of general contentment about the patients who were quiet and orderly, and that the medical case-books and records were well kept. The committee of management states in its report that the structural alterations carried out during the year include the erecting of fire escape windows in the male and female blocks D2 and that other precautions have also been taken against fire. The farm and garden accounts show a debit balance of £430 10*s.* on the year's working, this being mainly due to an outbreak of swine fever which necessitated the slaughter of a large number of pigs. The practice of subjecting the cows purchased to the tuberculin test has been continued with satisfactory results.

Fife and Kinross District Asylum (Report for the year ending July 31st, 1903).—The average number of patients resident during the year was 550, comprising 261 males and 289 females. The admissions during the year amounted to 137—viz., 74 males and 63 females. Of these 101 were first admissions. Dr. A. R. Turnbull, the medical superintendent, states in his report that "the most striking feature of the year's admissions was the large number and the very unfavourable nature of the male cases." Of the 74 male admissions no fewer than 12 were cases of general paralysis. "It is often said," adds Dr. Turnbull, "that general paralysis has become distinctly more frequent of late years, and our figures, though by themselves too small to allow of any definite conclusion, bear out in this respect the experience of other asylums. There is reason to believe that general paralysis is a sequel of syphilitic infection or of vicious indulgences which destroy the natural healthy tone and disease-resisting power of the constitution, and is therefore largely an avoidable disease; and the frequency of its occurrence has thus a very grave and serious meaning in reference to the mode of life and habits of many of the general population." The number of patients discharged as recovered during the year amounted to 41—viz., 19 males and 22 females, or 7·4 per cent. of the average number resident. The deaths during the year amounted to 32, or 5·8 per cent. as calculated on the same basis. Of the deaths three were due to influenza, three to pulmonary and other forms of tuberculosis, four to bronchitis and broncho-pneumonia, five each to cardiac disease and senile decay, six to general paralysis of the insane, and the rest to other causes. Extensions of the buildings to accommodate additional cases are in progress and additions have been made to the houses occupied by the head male attendant and clerk of works. Precautions have been taken and additional exits provided against outbreaks of fire. The rate of board for parochial cases has remained at £25 per annum per patient. The farm operations have been favourable and the accounts show a profit of £768 for the year. The Commissioners in Lunacy state in their report that owing to increase in the admissions the present accommodation of the asylum is taxed to the utmost, so that the extensions now in progress to accommodate 50 males and 50 females have not been started a moment too soon, that the institution was in excellent order and scrupulously clean, that the inmates were neatly and suitably clothed, that the bedding and sleeping rooms were in good condition, and that the medical books and records were accurately and regularly kept. The committee of management states in its report that steps for installing electric light in place of gas had been taken in the summer of 1903.

VITAL STATISTICS.

WE have received from the Registrar-General the following figures relating to the year 1903 which are extracted in advance of publication from his quarterly return. These figures will be appreciated by medical officers of health who need them for their annual report to the Local Government Board.

—	Annual rate per 1000 living.			Infant mortality. Annual death-rate of infants under one year per 1000 births.
	Births.	Deaths.	Death-rate seven chief epidemic diseases.	
England and Wales	28·4	15·4	1·46	132
76 great towns ...	29·7	16·3	1·89	144
103 smaller towns ...	27·4	14·6	1·41	136
Rural England ...	27·3	14·8	1·08	118

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8718 births and 5304 deaths were registered during the week ending Jan. 23rd. The annual rate of mortality in these towns, which had been 20·6, 20·3, and 19·0 per 1000, further declined last week to 18·1 per 1000. In London the death-rate was 17·4 per 1000, while it averaged 18·4 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 2·3 in King's Norton, 7·1 in Hornsey, 8·7 in Barrow-in-Furness, 10·3 in East Ham, 11·3 in Bournemouth, and 11·8 in Leyton and in Hastings; while the highest rates were 22·6 in West Ham, 22·8 in Liverpool, 23·2 in Wigan, 23·6 in Tynemouth, 24·0 in Stockton-on-Tees, 25·0 in Great Yarmouth, 29·5 in Preston, and 39·4 in Merthyr Tydfil. The 5304 deaths in these towns last week included 427 which were referred to the principal infectious diseases, against 495, 462, and 450 in the three preceding weeks; of these 427 deaths 121 resulted from whooping-cough, 114 from measles, 66 from diarrhœa, 64 from diphtheria, 36 from scarlet fever, 25 from "fever" (principally enteric), and one from small-pox. In Hornsey, Southampton, Norwich, Wolverhampton, Aston Manor, Birkenhead, Huddersfield, Halifax, and in eight other smaller towns, no death from any of the principal infectious diseases was registered, while they caused the highest death-rates in West Bromwich, Burnley, Preston, Gateshead, Rhondda, Merthyr Tydfil, and Swansea. The greatest proportional mortality from measles was recorded in West Ham, Warrington, Preston and Rotherham; from diphtheria in St. Helen's and Rochdale; from whooping-cough in Rochdale, West Hartlepool, Gateshead, Newport (Mon.), Rhondda, Merthyr Tydfil, and Swansea; and from diarrhœa in West Bromwich. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. One fatal case of small-pox was registered last week in Gateshead, but not one in any other of the 76 large towns. The Metropolitan Asylums hospitals contained 24 small-pox patients on Saturday last, Jan. 23rd, against 26 on each of the three preceding Saturdays; three new cases were admitted during the week, against four, six, and four in the three preceding weeks. The number of scarlet fever cases remaining under treatment in these hospitals and in the London Fever Hospital, which had been 1632, 1659, and 1660 at the end of the three preceding weeks, had further risen to 1677, at the end of last week; 178 new cases were admitted during the week, against 194, 201, and 195 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 404, 433, and 406 in the three preceding weeks, declined last week to 353, and were 58 below the number in the corresponding period of last year. The causes of 78, or 1·5 per cent., of the deaths registered in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Bolton, Salford, Bradford, Cardiff, and in 39 other smaller towns; while the largest proportions of uncertified deaths were registered in Northampton, West Bromwich, Liverpool, St. Helen's, Blackburn, Sheffield, Sunderland, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 21·7, 23·2, and 20·2 per 1000 in the three preceding weeks, further declined to 19·8 per 1000 during the week ending Jan. 23rd, but was 1·7 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·0 in Greenock and 14·9 in Paisley, to 25·2 in Dundee and 26·2 in Perth. The 655 deaths in these towns last week included 19 which were referred to measles, 14 to diarrhœa, 11 to whooping-cough, four to "fever," three to diphtheria, two to small-pox, and one to scarlet fever. In all 54 deaths resulted from these principal infectious diseases last week, against 71, 53, and 63 in the three preceding weeks. These 54 deaths were equal to an annual rate of 1·6 per 1000, which was slightly above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 26, 13, and 23 in the three preceding weeks, declined again last week to 19, of which 13 were registered in Glasgow and five in Dundee. The deaths from diarrhœa, which had been 21, 15, and 13 in the three preceding weeks, rose again to 14 last week, and included five in Glasgow, four in Edinburgh, three in Aberdeen, and two in Dundee. The fatal cases of whooping-cough, which had been 15 in each of the two preceding weeks, declined last week to 11, of which four occurred in Edinburgh, two in Glasgow, and two in Leith. The deaths referred to different forms of "fever," which had been three in each of the two preceding weeks, increased to four last week and included three in Glasgow. The three fatal cases of diphtheria corresponded with the number in each of the two preceding weeks and were all registered in Glasgow. The deaths from small-pox, which had been five, three, and five in the three preceding weeks, declined again last week to two, both of which occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 177, 213, and 198 in the three preceding weeks, further declined last week to 167, and were 16 below the number in the corresponding period of last year. The causes of 27, or more than 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 31·8, 27·8, and 28·8 per 1000 in the three preceding weeks, declined again to 28·0 per 1000 during the week ending Jan. 23rd. During the past four weeks the death-rate has averaged 28·6 per 1000, the rates during the same period being 19·2 in London and 18·7 in Edinburgh. The 189 deaths of persons belonging to Dublin registered during the week under notice, showed a decline of 20 from the number in the preceding week and included eight which were referred to the principal infectious diseases, against 16, 23, and ten in the three preceding weeks; of these, five resulted from whooping-cough and three from "fever," but not one from any other of the principal infectious diseases. These eight deaths were equal to an annual rate of 1·1 per 1000, the death-rates last week from the principal infectious diseases being 1·4 in London and 1·3 in Edinburgh. The fatal cases of whooping cough, which had been 12, nine, and five in the three preceding weeks, were again five last week. The deaths referred to different forms of "fever," which had been two, five, and two in the three preceding weeks, rose again last week to three. The 189 deaths in Dublin last week included 40 of children under one year of age and 54 of persons aged 60 years and upwards; the deaths of infants showed a marked excess over the number in the preceding week, while those of elderly persons were considerably fewer. Five inquest cases and four deaths from violence were registered, and 67, or more than a third, of the deaths occurred in public institutions. The causes of 11, or nearly 6 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: E. W. Luther to the *Cæsar* and J. S. Lambert to the *Victorious* (dated Feb. 2nd, 1904). Surgeons D. P. Chapman to the *Victorious* and A. C. Bean to the *Cæsar* (dated Feb. 2nd, 1904); G. R. MacMahon to the *Leander* (dated Jan. 21st, 1904); and R. A. Ross to the *Vivid* (dated Feb. 14th, 1904).

ROYAL NAVAL VOLUNTEER RESERVE.

The undermentioned gentleman has been appointed an Honorary Surgeon—viz., Charles O'Brien Harding (dated Jan. 18th, 1904).

ROYAL ARMY MEDICAL CORPS.

Lieutenant O. Challis, from temporary half-pay, to be Lieutenant (dated Dec. 24th, 1903). Lieutenant O. Challis to be Captain (dated Dec. 24th, 1903).

Lieutenant-Colonel E. L. Maunsell is specially selected for increased pay under Article 365 Pay Warrant. Lieutenant-Colonel P. Mulvany succeeds Lieutenant-Colonel W. J. R. Rainsford, C.I.E., as medical officer in charge of the Princess Louise Hospital at Alton. Lieutenant-Colonel C. R. Tyrell is posted to the South-Eastern District for duty.

INDIAN MEDICAL SERVICE.

The following is a list of the successful candidates at the Indian Medical Service examination held on Jan. 19th and four following days:—

	Marks.		Marks.
H. B. Drake	3515	I. D. Jones	2834
E. C. Hodgson	3167	H. Watts...	2810
W. S. McGillivray	3046	J. Anderson	2800
W. Gillitt	2991	W. T. Finlayson	2799
W. F. Brayne...	2978	H. E. Stranger-Leathes ...	2792
M. S. Irani	2899	E. A. Roberts	2789
S. W. Jones	2882	G. G. Hirst	2777
W. Tarr	2874	M. J. Quirke	2753
C. H. Barber	2867	J. M. Holmes	2684
W. T. McCowen	2839	M. F. White	2666

42 candidates (of whom 26 had University degrees) competed for 20 vacancies.

ROYAL ARMY MEDICAL CORPS (MILITIA).

Scottish District Company: Lieutenant (Honorary Lieutenant in the Army) W. V. Sinclair to be Captain (dated Dec. 19th, 1903).

VOLUNTEER CORPS.

Bide: 1st Volunteer Battalion the Buffs (East Kent Regiment): Surgeon-Lieutenant C. K. Bowes to be Surgeon-Captain (dated Jan. 23 d, 1904). 1st Volunteer Battalion, the Worcestershire Regiment: Surgeon-Lieutenant B. Addenbrooke to be Surgeon Captain (dated Jan. 23rd, 1904). 1st Volunteer Battalion the Hampshire Regiment: Surgeon-Lieutenant D. L. Thomson to be Surgeon-Captain (dated Jan. 23rd, 1904).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Edinburgh Company: Lieutenant D. Waterston to command under paragraph 55A Volunteer Regulations (dated Jan. 23rd, 1904).

VOLUNTEER INFANTRY BRIGADE BEARER COMPANIES.

East Surrey: Surgeon-Captain (Honorary Captain in the Army) E. W. St. V. Ryan, from 16th Middlesex Volunteer Rifle Corps, to be Captain (dated Jan. 2nd, 1904).

ALUMINIUM FOR MILITARY PURPOSES.

M. Moissonnier, principal apothecary of the first class in the French army, having taken part in several campaigns in Algeria and Tunisia, became impressed with the great importance which is attributed by commanding officers to the alleviation of the burden that the soldier has to carry. He accordingly was induced to turn his attention to aluminium, of which metal he made a profound study, and has now embodied the results of his investigation in a small volume of 219 pages, the publisher being M. Gauthier-Villars of Paris. Although aluminium is almost as common in nature as iron it has not been utilised to any considerable extent until within the last few years. Until lately the cost was prohibitive, 150 francs per kilogramme, but thanks to improved methods of production, all of which are described by M. Moissonnier, the metal can now be obtained for three francs per kilogramme. At this price it is permissible to believe, he thinks, that aluminium can with advantage be made to take the place of iron in the manufacture of many of the articles of equipment in use in the army. A metal as hard as iron and only one-fourth of the weight of silver, which is moreover unaffected by exposure to air whether moist or dry, or by immersion in water whether hot or cold, which does not oxidise or tarnish like most common metals, withstanding even the action of sulphuretted hydrogen, cannot but have a great future before it. Experiments which have been conducted under the auspices of the French Minister of War in Oran and elsewhere have conclusively shown the superiority of aluminium utensils, culinary and otherwise, over those of enamelled iron. Not only were the former more durable and much more easily kept clean but also very much lighter. It was calculated that the weight carried by each soldier was reduced by about 600 grammes (one pound and a third). In addition to culinary utensils, including plates and dishes, the following portions of a soldier's equipment can with advantage be fabricated of aluminium or one or other of its alloys: helmets, saddle-trees, stirrups, spurs, scabbards, buckles, belt-clasps, buttons, watch and other chains, epaulettes, water-bottles, drinking cups, spoons and forks, bicycles, drums, and field guns. Aluminium can be soldered to itself without the intervention of lead or any other metal and is consequently eminently suitable for the fabrication of surgical instruments and appliances. In conclusion, M. Moissonnier deals with the various alloys of aluminium and describes his methods for their analysis.

ARMY RECRUITING.

Owing to a change consequent on the decision of the Secretary of State for War as to the time of rendering the annual reports on recruiting in future the report of the Inspector-General of Recruiting just issued only embraces nine months of the past year. The number of recruits raised for the regular army, excluding Colonial corps, for the nine months amounted to 29,324, and for the Militia to 25,774. These numbers show a large diminution on those of the corresponding period of previous years. This falling off is, however, largely to be accounted for by the fact that owing to the mounted corps having been specially recruited during the late war they were all of them at the end of it largely in excess of establishment—to say nothing of the effect of the changes that have been made in the conduct of recruiting for the army with the view of preventing the enlistment of undesirable characters. With regard to the physical standard, the measurement of recruits, eyesight, and artificial teeth, the results of the very limited experiment of the employment of dentists having been such as to lead to an anticipated extension of the scheme, the report contains a number of interesting and instructive remarks and comments. A good deal of official inquiry into these and other points has already been instituted and is still taking place. The large number of recruits lost to the service owing to their physical unfitness and the growing increase in the percentage of rejections on this ground are forcibly pointed out in the report. Major-General Sir F. Howard, the inspector-general of recruiting, tells us that "the matter has been very fully dealt with by the Director-General of the Army Medical Department and a conference took place in July last between representatives of the Admiralty and the War Office to consider the subject as affecting the two services. As a result of this conference the matter was brought to the notice of the Home Office and an inter-departmental committee has been appointed to consider the subject of the physique of the classes from which recruits are drawn for both the army and the navy, with a view of determining whether the whole question should be considered by a Royal Commission." The subject is one of great national importance, especially when, as in the case of Manchester, the medical rejections amount to 49 per cent.

THE ROYAL NAVY LIST.

The 105th quarterly issue of this work of reference, dated January, 1904, contains notices of appointments and promotions in the Royal Navy up to, and including, Dec. 23rd, 1903. The records of the war and meritorious services of the officers of the Royal Navy, Royal Marines, and Royal Naval Reserve occupy a large portion of the book, the careers of some 10,000 officers being dealt with. The list of the vessels in the Royal Navy, with their tonnage description, war record, and so on, forms a complete guide to all ships in commission, with their officers and present stations. A feature of the recent issues of the Royal Navy List is the carefully compiled record of the current history of our first line of

defence. It is impossible in a short notice to enumerate all the matters of interest in connexion with the Royal Navy which find a place in this list and it must suffice to say that it is an indispensable work of reference to all who are in any way brought into contact with the Royal Navy. Messrs. Witherby and Co., 326, High Holborn, and 4, Newman's-court, Cornhill, are the publishers.

THE ROYAL ARMY MEDICAL CORPS MANUAL.

Surgeon-Major Reginald R Sleman, C.I.V., informs us that an extract from the manual for the Royal Army Medical Corps has recently been published giving important alterations in the drill. The movements are much simplified and are mostly in accordance with the changes adopted in infantry training. The words of command are more practical. The following movements have been abolished: extending at the halt, moving to a flank with sloped stretchers, and changing front. The bearer company and field hospital camps are altered; in the former the tents are reduced to nine, two of the officers' tents and the guard tent being omitted, and in the latter two tents for general stores have been added, whilst the tents for the Army Service Corps have been reduced by two. Surgeon-Major Sleman, after stating that a combined camp for a bearer company and a field hospital has been authorised, says "perhaps we shall soon see the *personnel* also combined to form a 'brigade medical unit.'"

SURGEON-MAJOR G. H. DARWIN, LATE 2ND VOLUNTEER BATTALION THE MANCHESTER REGIMENT.

Surgeon-Major G. H. Darwin, who has recently retired from the 2nd Volunteer Battalion the Manchester Regiment, after 17 years' service in the Volunteer Force, has done much good work in the cause of first aid and has been connected with the St. John Ambulance Association for 25 years. A correspondent, writing to a lay contemporary, recalls the fact that some years ago Surgeon-Major Darwin was made a Knight of Grace of the Order of St. John of Jerusalem and says that, "in the interest of those who work for years as Dr. Darwin has done, it is befitting that some further recognition should be forthcoming as a reward for past service and as an incentive to other medical men to go and do likewise."

INDIAN REST CAMPS.

According to the *Pioneer*, it seems that the Indian Government intends to abolish most of the halting places for troops known to all who have travelled in India as rest camps. We do not know the reasons which are causing the Indian Government to take this step, supposing it really to be contemplated. We should have thought that it was very desirable to have such places for the comfort and convenience of troops making long railway journeys, for example. So far as we know the rest-camp system has proved an effective, popular, and healthy system and we are consequently at a loss to understand why it should not be maintained, seeing that experience has been altogether in its favour.

THE TRAINING OF MILITIA RECRUITS AND VACCINATION.

The War Office in a recent memorandum issued to military districts announces that it has been decided that a militia recruit's training cannot be extended to make good the time lost through inflammation of the arm consequent on vaccination. Lord Roberts is of opinion that cases where men are totally incapacitated from work by vaccination are comparatively rare and that only in very exceptional circumstances need the training of a militia recruit be entirely suspended from causes attributable to his having been vaccinated.

ROYAL ARMY MEDICAL CORPS VOLUNTEERS.

The annual distribution of prizes won by the London Companies of the Royal Army Medical Corps Volunteers will take place at the headquarters of the corps, Calthorpe-street, London, W.C., on Feb. 6th, at 8 P.M. The proceedings will be followed by a dance.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Mr. G. P. Rugg, M.D. Aberd., L.R.C.P. Lond., M.R.C.S. Eng., who has been the medical officer of the British Home and Hospital for Incurables at Streatham, London, S.W., for more than 24 years, recently received from the patients and nursing staff of the home a silver bowl.—On Jan. 20th at Holmes Chapel, Cheshire, Mr. C. F. Sutton, M.R.C.S. Eng., was presented by his patients and friends with a silver soup tureen, together with a silver tea and coffee service and tray, as a token of esteem on his retirement from practice after nearly 40 years' residence.

Correspondence.

"Audi alteram partem."

ST. BARTHOLOMEW'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—Since our former letter was published by you in December, 1903, several events have occurred which are of importance to those interested in this institution; we are therefore again asking you to give publicity to our views on the present situation. We wish to emphasise the fact that the recent decision of the governors to extend our site, either by acquiring more land or by utilising adjacent land, already in our possession, on which to erect the nurses' home and the residential college for students meets with our unanimous approval and support. It has been alleged that the plans for rebuilding are not sufficiently advanced to enable any accurate estimates to be made and we should like, therefore, to say publicly that this is certainly not the case. The needs of the hospital for additional buildings were placed by us before our governors more than two years ago, and the fullest details of even the floor space required by individual departments were also given. This has enabled the hospital architects to supply estimates of the cost of the required buildings and the precise positions of the new blocks in a completed plan will not affect their conclusions.

It has always been the opinion of the medical council that all such additional buildings as they have asked for should be planned so as not to interfere with the rebuilding of the wards; and plans have now been submitted to us which support our views and show that a completely new hospital can be satisfactorily erected on our site of six and a half acres. It will thus be seen that, instead of St. Bartholomew's Hospital having no sufficiently settled plans or estimates, the latter are in an advanced state. We are, indeed, quite convinced that more than enough time has been already spent in preliminary considerations and we most heartily support the decision of the governors to issue an appeal at once, for we know better than others can possibly know how urgent is the need for prompt action.

There is another matter that has also attracted attention to which we desire to allude—namely, the situation of St. Bartholomew's. Its great accessibility is a matter of the very highest importance to the poor of London. So long as the City is the heart of London and of the empire, so long will access to it, and consequently to St. Bartholomew's, be cheap and easy, and so long will this charity remain a great consulting centre for the sick poor. The fact that its out-patients number about 150,000 in a year is a sufficient proof in itself of the usefulness of the hospital on its present site. There is no other district in any part of this city or in its suburbs where the hospital could be more advantageously placed and none where a more healthy site could be found. But the situation of St. Bartholomew's is further of importance to its medical school, and we may be pardoned for thinking that this is also a matter of material public interest. For many years past St. Bartholomew's has been not only one of the most important hospitals in England but also the largest school of medicine. In this way the benefits of the hospital are not restricted to its numerous patients but are spread over Great Britain and its colonies. For the past 20 years an annual average of 600 students have studied at St. Bartholomew's and nearly one in every eight medical men in England can lay claim to the distinction of having learnt medicine and surgery there. The interests of the hospital and of its school are one and removal to some remote district would not only destroy the school but would also by so doing completely alter the whole character of the institution itself.

Many other reasons might very easily be adduced in support of the appeal for sufficient funds both to maintain St. Bartholomew's in its present position and also to make it one of the most complete and modern of English hospitals of which the City of London might well be proud. But we have said enough to show the public that the present appeal is made in the best interests of the poor of London and we know that many thousands of our fellow citizens will now

and in after years reap the benefits of those buildings which money alone can supply.

We are, Sirs, yours faithfully,

SAMUEL GEE.	A. E. GARROD.
DYCE DUCKWORTH.	J. CALVERT.
T. LAUDER BRUNTON.	F. H. CHAMPNEYS.
NORMAN MOORE.	W. S. A. GRIFFITH.
SAMUEL WEST.	D'ARCY POWER.
JOHN LANGTON.	H. J. WARING.
HARRISON CRIPPS.	W. MCADAM ECCLES.
W. BRUCE CLARKE.	R. C. BAILEY.
ANTHONY BOWLBY.	W. D. HARMER.
C. B. LOCKWOOD.	W. H. H. JESSOP.
J. A. ORMEROD.	T. HOLMES SPICER.
W. P. HERRINGHAM.	A. E. CUMBERBATCH.
H. H. TOOTH.	

Jan. 20th, 1904.

THE PROPOSAL TO PROHIBIT MEDICAL PRACTITIONERS FROM DISPENSING.

To the Editors of THE LANCET.

SIRS,—I have read with interest your article entitled "The Medical Profession and the Dispensing of Medicines" in THE LANCET of Jan. 23rd, p. 242. It is to me a sign of hopeful augury as indicating the drift of opinion, at all events among the later generation of practitioners, that the discussion of this subject should have been found among the agenda of the British Medical Association. In your article, after quoting the clause of the Draft Medical Act Amendment Bill you plead for greater precision of the terms employed. Precision in law is certainly desirable but I would venture the opinion that in the explanatory details which follow the clause in question the work of definition has been overdone. No one surely would for a moment think of describing as a dispensing practitioner, in the ordinary sense of that term, a medical officer on shipboard or on military service compelled for the nonce to administer drugs to the sick in his charge. Still less, if possible, is the the term applicable to one who, in an emergency, finds it needful to administer a remedy. To treat as a pharmaceutical dispenser the physician who administered tuberculin, or, for that matter, the antitoxin diphtherim, to his patient would be, as you rightly suggest, to render homage to absurdity. It appears to me that all that the clause is intended to effect is the prohibition of the routine and business-like assumption of the duties proper to the pharmaceutist pure and simple by the medical practitioner. The proposed rule would, in fact, extend to licensees under the Medical Acts the prohibition imposed in this connexion by the Royal College of Physicians of London upon its Members and the Royal College of Surgeons of England upon its Fellows and the penalty in case of disobedience would logically be that which is allotted to a breach of professional contract. The wisdom of imposing a penalty at the present stage is open to question. I think such a step would be premature. It must be borne in mind that the dispensing of drugs enjoys among the general practitioners of England a sanction of long standing. It is not to be expected that a change which requires its total extinction is to be brought about by a legislative stroke of the pen and enforced by the imposition of a heavy fine. Such reasonable time as may be considered adequate to a reconstruction of arrangements on the new basis must in justice be allowed to precede any attempt at absolute prohibition. It is nevertheless, I consider, quite within the right of the General Medical Council to announce its disapproval of dispensing as a regular adjunct of medical practice with a view to promote its spontaneous disappearance, and such an announcement should meet with general approval. In the meantime it would probably be best to leave in abeyance the consideration of more decisive measures.

I regret, Sirs, to have to express a difference of opinion with regard to certain of the conclusions arrived at in your article. You suggest that a non-dispensing system is incompatible with practice in country districts and in the poorer quarters of large towns. Experience is, of course, our best guide to a settlement of this question, but it is not without significance that we have already learned much from this source, both in this country and on the continent, which does not tend to support your contention. Otherwise, how are we to account for the fact that in France, Germany, and other European countries, even in Scotland, where the population is distinctly less wealthy than in England, prescribing, not dispensing, is the rule alike in towns and in many, if not in most, of the country districts. It is not to be supposed that a dispensing druggist will expect a poor man always to pay at the same rate as the well-to-do. The practitioner does not do this nor can the druggist. Again, it is asserted that with the disappearance of the dispensing practitioner, the prescribing druggist will flourish more than ever. Wherefore? The medical man who now supplants him in his means of livelihood will then provide him with greatly increased means of earning it. Is it not then the interest of the druggist to send patients to the medical man and is it not rather his interest in the present day to retaliate upon his rival dispenser of a higher qualification? I know from personal experience that druggists do continue to send patients unsolicited and without suggestion to the prescribing practitioner, doubtless with an eye to legitimate business. The advantages which would accrue from a general adoption of the prescribing system are neither small nor few. The practitioner when released from what is to him the routine drudgery of making up his medicines will have more time to spend on the proper and sufficiently responsible duties of his profession. Being able to do more his ideal of work will be raised and the quality of that work will be improved to his own advantage and that of others, and there can be no question that he will also rise with it in public estimation. The dispensing druggist, receiving a stimulus of opportunity hitherto denied to him, will not continue to be, as now he too often is found to be, unstocked with many of the requisites of medical treatment, and he will be met with in districts which have hitherto failed to support both him and a practitioner who is in effect an *alter ego*. Who can reasonably doubt that the population at large will be the ultimate gainer by the addition to its resources and its convenience which these wide-reaching improvements must entail. Nothing, however, is to be gained by rushing through a reform of this kind and I have no desire to see this question finally settled without full and adequate discussion. Precipitate action is more likely to defeat than to further its object. At the same time I can only view with satisfaction the fact that this subject has at last been brought prominently before the eyes of the medical profession, so that it may have some prospect of effective treatment on an extended scale. I believe that the result of critical inquiry will be to further the development of prescribing practice and to prove that a system which has been found to work satisfactorily in other countries is equally suited to the requirements of the English people.

I am, Sirs, yours faithfully,

Green Lanes, N., Jan. 28th, 1904. B. G. MORISON.

To the Editors of THE LANCET

SIRS,—The medical practitioner has frequently been indebted to you for championing his cause, and never more so than at the present moment when by your editorial remarks and the insertion of Dr J. Oliver's letter you have drawn attention to the grievous wrong which it is proposed to inflict upon him. I should like, with your permission, to point out one monstrous result which would follow if the proposal to prohibit medical men from dispensing were to become law, and that is that the capital at present invested in dispensing practices, amounting in the aggregate to many thousands of pounds, would at the end of three years be represented by as many hundreds only or less. It is a matter of common knowledge that druggists repeat prescriptions again and again at the request of patients, and if the proposal were to become law one visit to the medical man would suffice in place of, it may be, nine or ten or more necessary under the present system. And it would be a vain hope to expect that the patient would make good the difference by paying an increased fee—indeed, it is more than probable that he would wish to pay less as there is a second fee to be paid to the druggist. After a while, also, the patient would go directly to the druggist without troubling his medical adviser and so save a fee which he would come to consider unnecessary. The inevitable result would be a big slump in dispensing practices and a corresponding loss in capital invested. It would be no argument to reply that a medical man has no vested right in a patient; the fact remains that under the present system he has such a right and it would be nothing less than wholesale robbery to deprive him of it without an attempt at compensation and to divert the

money which should go into his pockets into the coffers of the chemist and druggist.

I should also like to add from many years' experience in one of the poorest districts in London that such a scheme would be quite impracticable in working class districts. The working man is the backbone of a great many practices in the larger towns and his 1*d.* a week club payment or the small surgery fee he pays includes his medicine. He certainly will never pay a fee to the medical man and a second fee to the druggist and the practitioner in such districts will be unable to exist. This would inevitably lead, as Dr. Oliver points out in his letter, to still greater overcrowding of the already overcrowded out-patient departments of our hospitals and charitable dispensaries, an evil which even now cries aloud for a remedy.

I am, Sirs, yours faithfully,

Oxford-terrace, W., Jan. 25th, 1904. W. F. GRANT.

To the Editors of THE LANCET.

SIRS,—Dr. James Oliver has, I think, very wisely drawn attention to this extraordinary idea of interfering with the liberty of medical men. That such a proposition should be advanced at a time when there has been so great an exposure of the falsification of prescriptions, and while prescriptions are so extensively abused both by patients and druggists, is not only extraordinary but astonishing.

The medical man is absolutely responsible that his patient should have the exact drug, of proper quality, of the prescribed dosage, and for the right period. Under existing conditions he delegates this grave responsibility to others and cannot be assured in many instances that these requirements are fulfilled. The present system has grown up owing to the complexity of dispensing, but if our pharmacopœia were brought up to the present-day standard the greater part of this difficulty would vanish. Instead of giving advertisement to the advertising proprietary medicine vendors the medical man with little trouble and great saving of time to himself and patient could avoid resort to these undesirable methods.

I believe that this delegation of responsibility has done much to lower the reputation of the profession in many ways. One common example is the cheap criticism of the dispensing druggist on prescriptions and that of the patient and friends. If the liberty of the medical man needs curtailing it should be in the opposite direction—viz., that "no prescription should be put in the hands of a patient" and that "no medicament should be supplied to a patient except on the direct responsibility of a medical man."

I am, Sirs, yours faithfully,

HENRY RAYNER, M.D. Aberd.

Queen Anne street, W., Jan. 23rd, 1904.

LONDON HOSPITALS AND CENTRAL CONTROL.

To the Editors of THE LANCET.

SIRS,—If you regard this subject of sufficient general interest to warrant you in giving me a little more space I should be glad to reply briefly to the letter of "Hospital Surgeon" in THE LANCET of Jan. 23rd, p. 254. He has, I think, confused my proposal for the establishment of a central board with proposals recently made by other writers on the same subject. I agree with "Hospital Surgeon" that any board composed of delegates appointed by the hospitals themselves would be as useless to control the hospitals as is the present Central Hospitals Council or as is the General Medical Council to control the examinational activity of the universities and colleges which appoint the majority of its members. The two policies which seem to have secured the chief support from recent writers on this subject are either to strengthen the existing council by adding to the number of hospitals represented upon it or to invoke State aid and with it State regulation. The first, I believe, will prove ineffectual; the second is regarded with great disfavour by a majority of hospital administrators, whilst all practical men recognise that it is unlikely to be carried out during the lifetime of the present generation. Meanwhile the establishment of central funds to collect money for the hospitals is making it more and more difficult for the hospitals themselves to obtain individual support and at the same time shows no prospect of making such local and individual support unnecessary. Is it too much to ask that these three collecting funds should intrust to a board appointed by themselves the distribution of a small proportion of their alms in accordance with a plan which would increase both the central and local contributions towards medical charities in London and would provide at once a measure of effective control? The size of the board appointed by the three funds is not material to the scheme. One delegate from each fund, if one member with adequate leisure and experience could be found in each committee, would suffice. But whatever its size—and we can trust to the common sense of the appointing committees not to make it too large for its work—this board would possess the power of the purse and should be able as an independent body to perform the important functions assigned by "Hospital Surgeon" to his proposed commission. If the County Council or any other municipal or State authority were disposed to adopt the proposal to give certain hospitals free rates or to contribute to certain hospitals in proportion to the sums collected by the hospitals themselves it would be possible for such authority to make this board its almoner.

I venture to explain my suggestion a little more fully because I believe that the central authority proposed fulfils in nearly every respect the requirements of the kind of board desired by "Hospital Surgeon" and in the hope that being more within the region of practical politics than a commission appointed by the State it may secure his powerful advocacy.—I am, Sirs, yours faithfully,

London, W., Jan. 23rd, 1904. LAURISTON E. SHAW.

IN WHAT DOES CANCER CONSIST?

To the Editors of THE LANCET.

SIRS,—Under the above heading you published a letter from me in your columns on August 25th 1888, p. 395. Researches carried out during the intervening 15 years have tended to confirm both positively and negatively the thesis there advanced. Pathologists are coming to look more and more to the natural history and tendencies of the cell and less and less to vegetal parasitism as affording a solution of the mystery of cancer. The thesis to which I allude was thus stated in my letter of August, 1888:—

> If, then, we believe that in her wildest vagaries of pathological neoplasm nature makes no jumps; if we recognise a transition between the simple and the specific, the innocent and the malign, chronic inflammation and cancerous infiltration, sarcoma and carcinoma,—in what, then, does cancer consist? In generation, in inflammation, in repair, in carcinomata and sarcomata, the individual factor is morphologically apparently identical; what differences there may be are latent, not expressed. In inflammation, repair, and in malignant growths, then, there is a reversion to embryonal cell type. In the two former processes there is either organisation of embryonal cells into tissue or liquefaction into pus. In the neoplasms, on the other hand, there is an indisposition of the component cells either to differentiate into tissue or to suppurate. They lack the influence which makes for organisation; their instincts are of the lowest—are amœboid, in fact. They possess the fecundity of cells unfitted for "colonial" life and share their vagabond propensities. Herein lie the factors of malignancy, the causes alike of the rapid growth and the infectivity of cancer. It may also be, as Dr. Creighton with acumen and felicity has put it, that these cells possess a veritable "seminal" influence; that is, by their contact they cause other cells to generate, and make the offspring like themselves; witness a sarcoma of the ciliary body infecting the very lens substance itself. The recent asserted discovery in cancer cells of nuclear structure akin to such as is only found in spermatoblasts may possibly afford a morphological peg on which this theory may be suspended.

It it be inquired whence this influence is which makes for malignancy and what determines its initiation, it can only be replied that we are "the heirs of all the ages" of the lowly amœba no less than of our parents. That as we believe with von Baer that the history of the individual repeats the history of the race, so we carry within us (happily not all in the same degree) the idiosyncrasies which pertained to the life-history of our earliest progenitors. That, while in the processes of repair and of organising inflammation we see a survival of tendencies inherited from a later generation, a generation which had acquired colonial habits and a lower grade of fecundity, and which we regard as beneficent in the life-history and tendencies of the cancer cell we see occasional persistence of (Cohnheim) or reversions to, that still earlier type of structureless cell, inapt at specialisation, indisposed to colonial collaboration, and multiplying by fission with that terrific rapidity characteristic of the lowliest of living things.

I am, Sirs, yours faithfully,

Albert-terrace, Regent's Park, Jan. 27th, 1904. W. J. COLLINS.

"MANUAL TREATMENT IN TYPHOID FEVER AND DIPHTHERIA."

To the Editors of THE LANCET.

SIRS,—I am very much obliged to you for your criticism on my book ("The Elements of Kellgren's Manual Treatment") which appeared in THE LANCET of Jan. 9th, p. 100. I feel, however, called upon to reply to two of your remarks. You state that "We have our doubts as to the wisdom of 'heart

shaking' and 'side shaking' in typhoid fever and diphtheria." I would like to point out that these manipulations are of a very gentle nature, in spite of what their name might imply to the uninitiated. I have found in cases of typhoid fever and diphtheria that these manipulations, far from causing embarrassment of the heart or other distressing symptoms, could reduce the pulse-rate, remove intermittences of the pulse, if such existed, and make the cardiac action stronger and more regular; dyspnœa could also be relieved by their means. Two of my colleagues who practise Kellgren's methods have had the same experience.

You also state that "Surely also to allow absolute freedom of diet to a patient suffering from typhoid fever is, to say the least of it, risky." The manipulations we apply to a patient suffering from typhoid fever have the effect of preventing stasis in the abdomen by removing venous congestion and by equalising the pressure in different parts of the abdominal cavity; also of promoting the powers of assimilation and excretion and raising the natural power of resistance of the body, including in all probability the intestine. It is also likely that the formation of the natural antitoxin is aided. It is just because we are enabled to do this that the diet of the patient need not, as a general rule, be restricted. I stated in my book that I have always in fever cases which come under my care from the beginning of their illness allowed perfect freedom as regards diet and that I have never had the slightest cause to regret this procedure. I should perhaps have added that in the event of my noticing any harmful results arising in consequence of this freedom as regards diet I should at once take steps to regulate the latter in order to prevent or to remove such symptoms.

I am, Sirs, yours faithfully,

EDGAR F. CYRIAX, M.D.

West Hampstead, N.W., Jan. 23rd, 1904.

THE RELATIONS OF THE GENERAL PRACTITIONER TO THE CONSULTANT.

To the Editors of THE LANCET.

SIRS,—*Re* your leading article in THE LANCET of Jan. 23rd, p. 239, on the Relations of the General Practitioner to the Consultant, do you not think that the name of the consultant referred to should be made known or, any way, that "F.R.C.S." should furnish it to medical men who might ask him for same? This is a consultant unworthy of our professional confidence. I have discussed the question with two of my medical brethren and that is our feeling in the matter. We regard the circumstance as a most painful one, too.

I am, Sirs, yours faithfully,

Jan. 23th, 1904. E. A. LUBBOCK.

*** We feel that "F.R.C.S." must decide as to the advisability of communicating the name of the consultant to correspondents.—ED. L.

THE CAUSES OF HIGH INFANTILE MORTALITY.

To the Editors of THE LANCET.

SIRS,—A short time ago you inserted a letter on this subject in which I suggested that one of the causes of high infantile mortality among poor people was the want of proper medical help in the early stages of illness. The tables that are appended to the letter which I now send certainly show that, as a general rule, in those town unions which give very little out relief the infantile mortality is higher than in those which give a fair amount of out-relief. (It should be understood that the term "out-relief" includes all medical relief given in connexion with the Poor-law outside the workhouse, &c.) I may add that I possess some other evidence tending in the same direction. Of course, high infantile mortality arises from a great variety of causes but I think the facts here stated make it well worth while for the sanitary authorities in every district where a high death-rate for children prevails to inquire whether the poorest class have sufficient facilities for obtaining medical relief for their children. In the following tables I have called a union "indoor" which treated more than half its legal poor by means of indoor relief and the other unions I have called "outdoor." Under the heading "Infantile Mortality" I have given the numbers of infants per 1000 births who die under one year of age from the Registrar-General's tables for the ten years 1881–90. The first table includes all the London unions and the second table relates to the six largest towns.

I am, Sirs, yours faithfully,

Jan. 23rd, 1904. J. THEODORE DODD.

TABLE I.—*London.*

No.	Name of union.	Infantile mortality per 1000 births.	Policy of administration of Poor-law (1892).
1	Strand.	226	Strongly indoor.
2	Stepney.	196	Very strongly indoor.
3	St. George's-in-the-East.	182	"
4	Whitechapel.	173	"
5	London city.	171	Neutral.
5a	Shoreditch.	163	Very slightly indoor.
6	St. Saviour, Southwark.	166	Strongly indoor.
7	Holborn.	164	Slightly indoor.
8	Westminster.	163	Strongly indoor.
9	Fulham.	161	" "
10	Chelsea.	160	" "
11	Bethnal Green.	157	Indoor.
12	St. Olave, Southwark.	156	Outdoor.
13	St. Giles.	154	Indoor.
14	Kensington.	154	Strongly indoor.
15	St. George's, Hanover-square.	153	" "
16	St. Pancras.	153	Rather indoor.
17	Marylebone.	148	Strongly indoor.
18	Poplar.	148	Very slightly indoor.
19	Greenwich.	147	Outdoor.
20	Mile End Old Town.	146	Slightly indoor.
21	Lambeth.	145	Outdoor.
22	Islington.	144	"
23	Paddington.	143	Very slightly indoor.
24	Camberwell.	143	Outdoor.
25	Wandsworth.	141	"
26	Hackney.	137	"
27	Woolwich.	124	"
28	Lewisham.	121	"
29	Hampstead.	117	Indoor.

TABLE II.—*The Six Large Towns.*

Name of union.	Infantile mortality per 1000 births.	Policy of administration of Poor-law (1892).
Liverpool.	219	Indoor.
Manchester.	193	Very strongly indoor.
Sheffield.	176	Strongly outdoor.
Birmingham.	174	Indoor.
Leeds.	174	Strongly outdoor.
Bristol.	156	"

CHLORETONE IN SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—Your correspondent, Mr. John Dunlop, invites experiences from others of the use of chloretone in sea-sickness. I, too, first heard of this use of chloretone through your correspondence columns and a trial I made of it, so far as a single case goes, amply confirms the claims of this drug to soothe vomiting of reflex causation. In a family attended by me there is a little girl, now about 12 years of age, who has all her life been subject to "train sickness." If ever she travelled by train for more than a few miles she was invariably prostrated by vomiting. Devices of all kinds were tried and finally medicinal treatment, without any success; the only sure way of avoiding the sickness was to avoid a railway journey of any distance, and this she religiously did; but twice in each year, when going to and from the seaside in summer, the infliction had to be borne. Every

precaution would be taken, the stomach kept reasonably empty, the recumbent position at once assumed and maintained, medicines taken, &c., but on every occasion without exception the journey was rendered miserable to all and she herself was upset for several days. This year I provided her with chloretone in capsules, of which she took two five-grain doses before starting. For the first time in her experience the journey was performed quite comfortably, and this although the distance was considerably longer than had hitherto been attempted. On the return journey a similar dose produced equally happy results. I have always assumed that the action of chloretone in checking sickness is due to its anæsthetic effect on the mucous membrane of the stomach which soothes and lessens reflex irritability.

I am, Sirs, yours faithfully,

Bromsgrove, Worcestershire, Jan. 25th, 1904. CAMERON KIDD.

To the Editors of THE LANCET.

SIRS,—Mr. J. Dunlop asks in THE LANCET of Jan. 23rd p. 253, for your readers' experience of chloretone. I advised a lady who is always, whatever the weather, miserably sick on crossing the Channel to try the effects of a dose of ten grains. She tells me that the result was perfect both on going and returning. In another case of a patient, 40 years old, with mitral disease and a bad stomach a state of nausea was caused by the withdrawal of morphia to which he had been accustomed for four years. Thanks to chloretone this symptom was relieved entirely and the only (and what appeared at the time a serious) obstacle to the successful suppression of the morphia removed. When, with a view to morphia weaning, the alkaloid is decreased gradually according to my plan, there is not as a rule any trouble of this kind, but in the case of a patient with a bad stomach in whom such a symptom does occur I do not think anything, that is in these circumstances allowable, is as likely to be as efficacious as chloretone.

I am, Sirs, yours faithfully,

Paris, Jan. 25th, 1904. OSCAR JENNINGS.

A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to the report of a case in the *Daily Telegraph* of Tuesday, Jan. 26th, in which, during his cross-examination, the plaintiff, Dr. Williamson, stated that my fee for the removal of enlarged tonsils and adenoid growths of the naso-pharynx was 25 guineas. May I be allowed to state that I have never asked for, nor received, so large a fee for that operation? I regret that such a statement should have been made without my knowledge or consent.—I am, Sirs, yours faithfully,

Jan. 27th, 1904. HERBERT TILLEY, F.R.C.S. Eng.

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(1) WHAT IS VERONAL? (2) THE DANGERS OF TABLETS.

To the Editors of THE LANCET.

SIRS,—An article entitled "A Case of Veronal Poisoning" appears in THE LANCET of Jan. 23rd, p. 223. The writer inquires as to the nature of this new hypnotic. It was introduced only a few months ago and is di-ethyl-malonyl-urea. Its chemical formula is $C_7H_{12}N_2O_3$. The dose is from five to 15 grains, but personally I have found ten grains a sufficiently large dose in those cases in which I have prescribed it. The literature of the drug is as yet somewhat scanty, but the article by Berent in the *Therapeutische Monatshefte* for June, 1903, and that by Trautmann in the *Therapie der Gegenwart*, 1903, No. 10, are well worth perusal. Apparently the patient referred to had taken an overdose, hence the disastrous results. All hypnotics are dangerous and medical men cannot be too careful in prescribing them for their patients, and no druggist should repeat such prescriptions unless with the consent of the prescriber.

The article entitled "A Case of Acute Sulphonal Poisoning" recalls to my mind a letter which I wrote you some time ago, and which you were good enough to publish, on the dangers of tabloids or tablets, which you will. Mr. Hind tells how the patient under his care took three bottles of sulphonal tablets. This form of medication, as I have again and again pointed out, enables patients to prescribe for themselves. Why the profession is not alive to this fact I cannot tell. Surely it is an easy matter to prescribe powders, pills, or cachets. Or do they imagine that the druggist is unable to dispense prescriptions? Very soon, indeed, the druggist will be unable to do so simply from want of practice. We are yearly degenerating so far as the art of prescription writing is concerned. It is rapidly becoming a lost art and the reason is that we trust more and more to the manufacturing chemist rather than take the trouble to master the contents of the British Pharmacopœia. We are simply playing into the hands of those who care little whether their wares are advertised to the public or to the profession so long as they obtain a world-wide market. Even many of those houses which state that they do not advertise to the public do so by means of show-cases placed in a conspicuous position in druggists' shops.

Assuredly, medical men are fools not to see through all this gelatin coating. The genuine article is beneath it but the covering is so suited to their tastes that they reck little of the rest. If we would be richer in pocket and loftier in tone as a profession we must first sweep away all this trumpery and get back to the old-time powders and pills which, after all, are much more valued by the public than tons of tablets and elegant elixirs.

I am, Sirs, yours faithfully,

Edinburgh, Jan. 23rd, 1904. JAMES BURNET.

DEATH AND SUDDEN DEATH.

To the Editors of THE LANCET.

SIRS,—May I be allowed, on behalf of Dr. Brouardel and for the sake of accuracy and justice, to make a slight correction in the leading article on "The Death of Miss Hickman" which appeared in THE LANCET of Nov. 21st, 1903, p. 1443. You write: "The remains had evidently not been disturbed saved by marauding rodents and the agents of putrefaction which Brouardel has so aptly termed 'the labourers of death.'" The authorship of the term "labourers of death" ("travailleurs de la mort") is really due to the distinguished entomologist M. P. Mégnin. Dr. Brouardel quotes and adopts the expression in his work "Death and Sudden Death," translated by myself, and acknowledges M. Mégnin's claim in the following words (second edition, p. 75): "The observations of M. Mégnin, who has carefully studied the insects which prey on dead bodies and which he has picturesquely styled 'the labourers of death,'" &c. The term is to be found in M. Mégnin's work, "La Faune des Cadavres," from which the account of the processes of decomposition by insects in "Death and Sudden Death" is drawn.—I am, Sirs, yours faithfully,

F. LUCAS BENHAM, M.D., M.R.C.P. Lond.

Exeter, South Australia, Dec. 21st, 1903.

A REPUDIATION.

To the Editors of THE LANCET.

SIRS,—Our attention has been called to a report of police-court proceedings under the Merchandise Marks Act in respect of adulterated soda crystals supplied by a Messrs. Burgoyne and Co., and as we are commonly known in the trade and medical profession as Burgoyne and Co. we ask the favour of your kindly inserting this letter disclaiming any connexion with the house or proceedings in question. Thanking you in anticipation of your compliance with this request, We are, Sirs, yours faithfully,

BURGOYNE, BURBIDGES, AND CO.

Coleman-street, London, E.C., Jan. 21st, 1904.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Sanitary Neglect by Municipalities in Bengal: Further Supersession. — The Mulkowal Disaster. — The Plague Epidemic.

THE municipal commissioners of Nadia having made persistent default with regard to the sanitation of the town have been declared incompetent to perform their duties and have been superseded. This is the second case within a few months. It appears that there are no less than 825

well privies within the limits of the town and in consequence of this method of disposal of the excreta the water-supply is excessively polluted. Repeated inspections, reports, and admonitions failed to induce the commissioners to make any improvement. A serious condition exists in the low level of the town, causing it at times to be inundated. The taxation of the town is ridiculously low, being only about 7½*d* per head, and the people are well able to bear the additional tax which will now be imposed. There is no analysis given showing the exact state of the water, but it is reported as "so polluted as to be unfit for human consumption." The mortality of the town has been increasing year by year—viz., from 25·4 per 1000 in 1899 to 42·55 per 1000 in 1902. The so-called well privies are nothing less than holes dug in the ground and being so numerous it can readily be understood how polluted the soil must be. Moreover, as wells exist for the supply of water within the town area the danger is constant, especially as the soil is of sand. Being a place of pilgrimage also a severe outbreak of cholera might develop at any time. These evils have existed for several years and it is a question whether the Government is not to blame for allowing such a scandal to continue so long. This case is another instance showing that the natives of India are totally unfitted for sanitary administration.

At last some negative information about the Mulkowal disaster has been given. The medical officer who inoculated the villagers of Mulkowal with the antiplague serum has been granted a certificate to the effect that he is exonerated from blame in connexion with the accident in November, 1902. It will be remembered that 19 persons died from tetanus following plague inoculation. The real facts of the disaster are still suppressed and consequently distrust is widespread and the benefits of inoculation cannot be urged until confidence is restored. At the time of the appointment of the commission of inquiry I expressed doubts as to its fitness, but whatever its report more harm has probably been done by suppressing it than would have occurred by making public its conclusions.

The plague mortality throughout India has had a temporary decline, 15,606 deaths being recorded for the week ending Dec. 26th, 1903, as against 17,304 for the preceding seven days. The decline appears to be entirely in the Bombay Presidency, as the other provinces show but little change. The figures for the week are: Bombay districts, 5656, as against 7579; United Provinces, 2522, against 2504; Central Provinces, 1547, against 1687; Bengal, 1377, against 1039; the Punjab, 1049, against 1066; Central India 1176, against 1175; and Bombay city, 65, against 57. Although plague has been quiescent in Bombay city and rife in the Mofussil the Government still persists in confining its plague inspections to railway passengers leaving the city and to persons leaving the city by the coast steamers, while those arriving from infected areas are permitted to enter the city unchallenged. This very act shows the inefficiency of railway inspection, because, notwithstanding the virulence of plague in the districts, Bombay city has been quiescent as regards plague for over six months.

Jan. 9th.

IRISH UNIVERSITY EDUCATION.

(FROM A CORRESPONDENT.)

THERE is no question which is exciting greater attention in Ireland at present than the extremely thorny problem of the settlement of university education; and, unfortunately, political and sectarian feeling has entered so largely into the discussion that it is well-nigh impossible to touch the subject in a journal which is concerned with the matter simply in its bearings on the medical profession.

Every true Irishman, irrespectively of his religion or politics, must admit that the present position of educational matters in his native country is indeed intolerable, if for no other reason than for the great uncertainty on two points: (1) Is fresh legislation on Irish university education about to be introduced? and (2) In what direction is this new legislation to go? We have had a Royal Commission on University Education in Ireland giving us several volumes full of contradictory evidence and with many suggested schemes all illustrating the truth of the proverb, "*Tot homines, quot sententiæ.*" Then quite recently, as reported in THE LANCET, we have had rumours of a scheme to settle everything by the creation of a national university with three autonomous and coördinated colleges, a plan put forward first by Sir Antony MacDonnell, the Irish Under Secretary, and afterwards by Lord Dunraven. Indeed, almost every week the press gives us details of various schemes which are to bring peace and contentment to Ireland.

As a natural result of all this utter uncertainty many Irishmen are at present sending their sons outside that country to be educated. We know of numbers of young men who have of late gone to Oxford and Cambridge and, from a purely professional point of view, it is a remarkable fact that in the year 1903 there were attending the University of Edinburgh 677 students of medicine and of these 118 were from Ireland. If to this number we add those who attended the extramural medical schools in that city as well as those who stopped at Glasgow, it is probable that from 150 to 200 students went from Ireland to Scotland to pursue their medical studies, a proportion altogether unknown a few years ago. So long as the present state of affairs exists this, I fear, will continue unless statesmen will say definitely that they will make some changes in Irish university education or they will not. Constantly to be leading people to expect legislative measures is a profound mistake and a sign of very feeble statesmanship if really nothing is meant in the end to be done. In attempting to give any country a new measure of university education three factors naturally suggest themselves: (1) The projected legislation should strictly follow academic lines; (2) it should aim at satisfying all sections of the people who demand higher education; and (3) it should possess the elements of finality.

Can any such scheme be put forward for Ireland? I fear many will say that Irish university education is a Chinese puzzle and that its solution passes the wit of man. A statesman in dealing with such a question, so full of inherent difficulties, might ponder over several solutions. First, he might attempt a scheme of united education but unfortunately it is impossible in Ireland, as even in such a field as secular education people will not unite. He might, however, persevere with the scheme in the hope that with mutual toleration matters in the end would come right. Secondly, he might grant sectarian education that is like Mr. Balfour's proposal—have three universities, one for Roman Catholics, one for Episcopalians (Trinity College), and a third for Presbyterians—or he might advise that there should be only two universities, one for Irish Roman Catholics and the other for Irish Protestants, the latter being Trinity College, Queen's College, Belfast, and other affiliated institutions. Or, thirdly, in despair the statesman after full inquiry might decide to leave matters *in statu quo* and to do nothing. This apparently is what is about to take place at present, for at a meeting held in Belfast on Jan. 22nd the Marquis of Londonderry, who presided, said: "There is no question whatever of the creation of a Roman Catholic university. Let me say once and for all—and you may take it from me—that during the existence of the present Government there will be no question whatever of the creation or foundation of a Roman Catholic university." This is the last official pronouncement on this question by a member of the Cabinet. It does not, however, preclude Lord Dunraven's scheme being brought forward either by the Government or by a private Member.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Degeneration of the National Physique.

IT is the custom for the lecturer on hygiene at the Midland Institute to deliver twice in each year a public lecture on some matter connected with the laws of health. The present lecturer is Mr. William Wright who is also a lecturer in the anatomical department of the University, and the subject of his recent popular lecture was that mentioned above. Mr. Wright advocated the formation of boys' brigades and cadet corps and also suggested that the German plan of allowing ten minutes or a quarter of an hour's play to every hour's work in school was one which might with advantage be imitated.

Health of the City.

It is also a custom for the chairman of the health committee to preside at these lectures and to make a statement

in reference to the health of the city. Alderman Cook on this occasion referred to the exceedingly low death-rate of the past year, 17·1 per 1000, the lowest in the city since any records have been kept. The number of cases of typhoid fever was small, 382 as against an average of 588 in the previous ten years. The number of deaths of young children from summer diarrhœa was 597 as against an average of 645 in the previous ten years. Small-pox threatened to become prevalent on three occasions but owing to the energetic measures adopted by the health committee it never got beyond control and was stamped out. Eight patients were at present in the hospital but the committee hoped that the city would soon be clear of the disease. Owing to the diminution in scarlet fever the committee had again been able to provide accommodation for cases of typhoid fever at the Yardley-road Hospital and 11 patients were now being treated there. The alderman concluded by stating that in his opinion 16 per 1000 was an ideal death-rate and it was pleasing to know that the rate in Birmingham was approaching that figure.

The Training of Imbecile Children.

A conference has recently been held between representatives of the Birmingham board of guardians and of the education committee with a view of coming to a conclusion as to the best method of dealing with idiot or imbecile children and feeble-minded girls who should be placed under permanent care. Mrs. Pinsent, chairman of the special schools subcommittee, explained fully the work which was being undertaken by the after-care subcommittee which tries to help the children from the special schools after the age of 16 years when they become emancipated from all control. It was found that there were a large number of cases for which there was no adequate provision and the only thing that could be done for them was to advise the parents to make application for assistance to the Poor-law authorities. The parents were, however, in many cases prejudiced against the Poor-law and preferred, as they said, "to battle on without its assistance." Various suggestions were made and discussed as to the treatment of such cases by the board and the question of the treatment of feeble-minded girls when they reached the age of 16 years was fully dealt with. Cases were cited showing that this was a very serious subject. The members of the conference felt that legislation was necessary in this particular direction, the representatives of the guardians pointing out that in this, as in other instances which had been discussed, they could only deal with each case upon its merits. They also expressed their sympathy with the work which was being done and promised to give every assistance in their power to the after-care subcommittee in its work.

Midland Counties Home for Incurables.

The Earl of Denbigh presided over the annual meeting of this institution which has recently been held. The receipts for the year had amounted to £6249 as compared with £5082 in the previous 12 months. Mr. Best's legacy of £2000 had been placed to the endowment fund which was still small and which only produced about one-tenth of the annual income. The average number of inmates during the year had been 87, as compared with 83 in the preceding year, and the number of pensioners had been raised to 29.

Antivivisectionist Pronouncement by a Bishop.

One is accustomed to hear extraordinary statements made upon antivivisectionist platforms but perhaps the most extraordinary which has ever come under my notice is that which the *Birmingham Daily Gazette* reports as having been made by Bishop Mitchinson, Master of Pembroke College, Oxford, at an antivivisectionist meeting held at Cheltenham recently. The attitude towards science and the acquisition of new knowledge which this speech reveals is one which one can hardly credit as existing at the present day. But the speech requires no comment. The bishop said that the antivivisectionist cause had a tremendous business before it in gaining the support of the country. How was the strong and widespread feeling against their cause to be accounted for? The English were not cruel or callous. He was inclined to think that they had all gone mad upon that blessed word "research." At Oxford they were as "mad as a March hare" upon it and the sooner they were shut up in an asylum the better it would be for learning. They had actually been put to the necessity of offering "research" degrees the qualification for which was to have done what he should have thought it the part of any wise man not to do—write a book. They had it at every turn and it was not only amongst scientific men they found it. It was the same with classical men; they were wild about getting research somehow or other into the different examinations. The one great step towards salvation was to set their youngsters to research. It constituted amongst literary people a mania, and first of all it was fostered by academic clamour. The bulk of modern literature also had something to do with "finding out something fresh" and it was the same in theology. Everybody was trying to find and course a new hare. If one person found a queer thing in an animal everybody else had to find out two queer things, and they were never happy unless in finding some "mare's nest." He did not think all this a mark of intellectual progress; it was far too selfish. His lordship also regarded the lessened hold of religion and the "hide-bound, cynical body worship" as two other causes making against antivivisection. The scare for our own skins was largely due to the medical profession whose attitude on the vivisection question would, he was afraid, bring about a split between the soul doctor and the body doctor—had, in fact, already done so in some cases.

Electric Tramway Accident at Dudley.

An extraordinary accident and one of a character most alarming to the public occurred a few days ago at Dudley. A cart laden with iron and drawn by three horses was being driven up a road in the town where there are overhead wires and on account of the muddiness of the surface the cart was kept upon the paved tramway track. When about halfway up Castle-hill the driver noticed a flash coming from the tram-rails, immediately after which the leading horse swerved, or, as the driver imagined, was drawn against one of the iron pillars carrying the wires. The driver jumped down and taking hold of one of the horses sustained a shock which caused him to stagger. Almost simultaneously a blue flame was seen to spring from the iron pole and run along the draught-chains of the cart. All three horses then fell to the ground as if struck by lightning and smoke was seen ascending from the portions of their bodies which the chains had touched. The driver of the cart was not seriously injured but all the horses were killed instantaneously. Moreover, at the points where their bodies had been touched by the chains there were deep burns, in some places penetrating to a depth of an inch. It was at first thought that an overhead wire had broken but when the state of affairs came to be looked into it was found that the accident arose from a defective insulator. This had been presumably burned through. At any rate, the damage had rendered the supporting pole "live" to the electric current and the condition of the horses shows that the current at the time must have been very powerful.

Prosecution of a Jam-Maker.

The city authorities recently summoned a local maker of jam for having on his premises several casks of fruit pulp for sale or for preparation for sale which were unfit for human consumption. When the inspector visited the premises the proprietor informed him that he made jam of various kinds from fruit pulp, sugar, and glucose; and grape jelly from grape pulp. Rejected jams were re-mixed with fresh mixing, were reboiled and sold again. For sweetening purposes he said that he had used the refuse of boiled sweets of various kinds and as a result a quantity of the jam had been rejected. The inspector on his first visit found a number of casks containing gooseberry pulp in a state of decomposition, also bottles containing decomposed fruit. On his second visit these had been marked "Not to be used." The medical officer of health in his evidence stated that he had examined the pulp and found it to be decomposed and to contain pieces of fungus. In answer to an inquiry from one of the magistrates he said that the effect upon those who ate jam made from this pulp would probably have been to produce gastric disturbance, possibly sickness, not much more than that, but that the result would certainly have been conducive to the spread of disease. The defence was that the proprietor had not sent for an inspector because he thought that if he had done so he would have been punished for having the pulp, although he had made it known himself by calling for inspection. It was also urged that the barrels had been labelled prior to the first visit of the inspector but that the labels had been washed off by rain. The bench, after retiring to consider the case, said that they found the offence proved and, regarding it of a grave nature, considered it their duty to impose the maximum penalty of £20 and costs or in default a month's imprisonment.

Jan. 23rd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

"Doctors and Friendly Societies."

IN the course of an address delivered at a meeting of Oddfellows in Hulme on Jan. 23rd Mr. W. J. Galloway, M.P., made some remarks on the relation between friendly societies and the medical profession which may perhaps excite criticism. So long as the present relations exist there will be no objection to the statement that "the interests of the societies were so interwoven with those of the great medical profession that it was essentially necessary good feeling should exist between the two." But when, as in his next sentence, he says "he sympathised with the view of the friendly societies that if a doctor entered into a contract to visit its members for a certain sum of money it was absurd of him to say he would only visit such members as earned only a certain wage," he raises debatable questions. He said further: "The question of wages had nothing whatever to do with belonging to a friendly society and indeed the latter welcomed all who would agree to pay the stipulated amount of subscription." It is quite true that if a man makes a contract he is bound to carry it out, but if anyone, however wealthy he may be, is welcomed as a member of a friendly society and as such claims the services of the medical man it will be necessary for medical men to consider whether such contracts are conducive either to their self-respect or to their material welfare. With many the result of such consideration would probably be that it was not desirable to take such contracts. Mr. Galloway went on to comment adversely on "certain doctors who formed societies and ran them as kinds of unlimited companies. They caught a certain number of people who would subscribe so much a week and for that they undertook to visit them whenever they were ill," and went on to say that it "very often happened that a doctor had a great many more patients than he could properly attend to" and that even when it was not so "it had unfortunately been proved that he had not given that care and attention that their cases required." These general accusations are easy to make and it would be well if Mr. Galloway would take the trouble to hear the medical man's view before endorsing the one-sided statements that have no doubt been made to him. The whole question of the medical treatment of those who are above the rank of paupers and below those who are sufficiently well-to-do to come under the category of "private patients" is fraught with difficulties. There are many objections to the "club system" as it is ordinarily understood. On the part of the members it leads to a sense of proprietorship as regards the medical officer and to scant courtesy, not agreeable to anyone with the feelings of an educated gentleman. The system of contracting to be kept in health is said to work well among the Chinese but it does not as a rule attract the Western mind and the unlimited private companies that excite Mr. Galloway's wrath are not popular with the majority of our profession, although it is quite possible, no doubt, that the medical man may run one with the integrity that Mr. Galloway desires the medical profession to maintain. He appears to think "it does not seem difficult to find some solution of the question which would protect the interests of the friendly societies and also those of the medical profession." He may possibly, therefore, find an opportunity of making useful suggestions if the "Bill to be introduced into Parliament for the better regulation of the medical profession" comes under discussion. But he must bear in mind that though long suffering the profession may become tired of being "sweated."

New Small-pox Hospital.

Application has been made to the Local Government Board on behalf of the Ashton and Stalybridge borough councils and the district councils of Hurst, Andenshaw, and Limehurst to form themselves into a joint small-pox hospital board to maintain a hospital at Hartshead Farm, which has an area of 41 acres. At the inquiry held at Ashton-under-Lyne Dr. Wheaton, the inspector, suggested that the mayors of Stalybridge and Ashton should be ex-officio members of the board. This was objected to by the various representatives but the difficulty was got over by all assenting to the chairman of the board of guardians being nominated an ex-officio member. Mr. W. H. Hughes of Ashton stated that at the beginning of the year there were 31 patients in the present unsuitable small-pox hospital at Ashton and 170 cases had been treated since the epidemic broke out. It was agreed that the designation should be "Ashton and District Joint Small-pox Hospital." How long will it be before such hospitals will be reminders of a disease once prevalent but now almost forgotten, like the leper houses which are still to be found in various parts of the country?

Brandy and British Brandy.

A good deal is said just now about whisky being largely adulterated with grain spirit and it seems that the public are similarly cheated with regard to brandy, of which the reputed parent, or rather grand-parent, is the grape, while it is really made up of "spirit distilled from potatoes, beet-root, or something of that sort," with an infinitesimal modicum of French brandy. A grocer of Lower Broughton was fined £10 and costs on Jan. 20th for selling stuff of this kind as Martell's Three Star Brandy. The defendant said that it was ordered as ordinary brandy and sold as such. It will be well, therefore, not to order "ordinary brandy." But he also said it had been sold to him as Martell's brandy, bottled by a Leith firm, and that the Manchester agent of that firm had since told him that an action had been brought by Martell's against the printers of the label. The next day, Jan. 21st, the magistrates at Church were occupied with a similar case where the so called brandy was flavoured grain or potato spirit. The chairman said it was evidently the custom of the trade to sell "British brandy," about which the public knew very little and were deceived and must be protected. For similar offences two other publicans from Oswaldtwistle were also fined. It is clear, therefore, that this nasty injurious stuff is sold very largely. If it were possible it would be better to stop its production than to fine the publicans who in some cases may be themselves deceived.

The late Mr. William Crosby, M.R.C.S. Eng., L.S.A., of Salford.

Yesterday the funeral took place of one of the oldest and most respected of the general practitioners of Salford, Mr. W. Crosby. He qualified as Member of the Royal College of Surgeons of England and Licentiate of the Apothecaries' Hall in 1847 and was 78 years old at the time of his death. His funeral was largely attended by members of the profession, including Dr. Maguire of London, and by some of the principal inhabitants of Salford. By his knowledge of his profession and by his general kindness he had long had a very extensive practice not limited to the Salford side of the Irwell. But outside his own calling he was well known for his great love and knowledge of music and, like another of our Manchester medical men, he was an accomplished organist. For many years he was a constant attender of Hallé's concerts and his refined features, of a somewhat Georgian type not frequently seen in these days, were very familiar to the audience. He leaves a widow and a wide circle of friends to deplore their loss.

Jan 26th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Administration of the Midwives Act in Cardiff.

AT a meeting of the Cardiff division of the British Medical Association held in Cardiff on Jan. 21st the medical officer of health of the borough (Dr. E. Walford) gave a *résumé* of the Midwives Act, 1902, and made special reference to its local application. The Cardiff corporation, which is the local supervising authority under the Act, has delegated the whole of its powers and duties to the health committee and has appointed the medical officer of health the executive officer, adding to his staff an additional woman inspector who has had some training as a nurse. At present she undertakes all the clerical work connected with the administration of the Act and later will carry out a certain amount of supervision and inspection. In response to public notices issued by the corporation 60 or 70 women applied for forms of application to the central board for certificates. Nearly all these applications were made on the ground that those applying were already

acting as midwives, very few on the ground of holding any kind of certificate. Dr. Walford stated that he feared that the supervising authority would have some difficulty in making the former class of women carry out the rules of the central board in a satisfactory manner. Some are unable even to read or to write, while others have a most elementary knowledge of these arts and would be quite incapable of keeping the records and registers of cases and case books which are required by the board. Rule No. 17, which provides that a midwife must in certain specified circumstances decline to attend a patient alone and must advise that a medical practitioner must be sent for, met with some criticism at the hands of Dr. Walford and other members of the division. It was pointed out that the midwife can only advise the attendance of a medical man; there is no power to enforce his attendance nor is there any provision for paying him a fee. In view of these circumstances which might at any time be responsible for disastrous results it was decided to ask the Cardiff corporation to discuss the matter with a deputation appointed by members of the division in order, if possible, to arrive at some means of overcoming the difficulty.

Medical Acts Amendment Bill.

Clause 34 of the Medical Acts Amendment Bill, which has been drafted by the medico-political committee of the British Medical Association, met with a great deal of adverse criticism at the same meeting of the Cardiff division of the Association. The clause provides for the disclosure of the identity of a practitioner by requiring him to place his full name outside the premises in which he practises. Dr. T. Wallace and others considered that the price which general practitioners were asked to pay for the suppression of unqualified practice was too great and they thought that it was unnecessary to affix the name of an assistant or of a locum-tenent outside his place of residence. Ultimately a motion was carried (though not unanimously) approving of the clause with a recommendation for exemption to be made in the case of a locum-tenent or deputy holding office for two months or less and permanently in the case of all charitable institutions.

Instruction to a Bearer Corps in Infirmary Wards.

A suggestion has been made to the board of management of the Cardiff Infirmary by the officers of the Welsh volunteer bearer corps that members of the corps should be allowed to attend the male wards of the infirmary for the purpose of gaining experience in the dressing of surgical cases. It is proposed that each member of the corps should have two weeks' instruction in each year under the supervision, not of the surgeons, but of the ward sisters. With suitable restrictions there does not appear to be any reason why the nursing committee of the infirmary which has the matter under consideration should not comply with the suggestion. The members of the bearer corps could not fail to benefit by the instruction they would receive and the good work done by the institution would be much more widely known and appreciated than it is at present by the working classes of the town.

Vagrancy and Labour Colonies.

The court of quarter sessions of the Lindsey division of Lincolnshire has recently issued a very exhaustive report based upon an account of the Belgian labour colonies submitted by Mr. H. J. Torr, J.P., and Major R. A. Marriott, the governor of the prison at Lincoln. This report of the Lincolnshire justices was considered on Jan. 23rd by a subcommittee appointed by the Glamorganshire court of quarter sessions when a motion was unanimously adopted expressing the opinion that the vagrancy question required instant attention and recommending that the Government should be asked to appoint a commission to consider the best method of grappling with it. It is stated that in the Cardiff union alone the number of tramps dealt with in 1903 was 5500, an increase of 4400 over the number recorded in 1900. The Bridgend guardians have convened a conference of representatives of Glamorganshire boards to consider the establishment of a labour colony for the county.

University College, Bristol.

The fifth annual dinner of the University College Colston Society was held in the large hall of the College on Jan. 21st. Mr. Henry Hobhouse presided and the principal speakers were Sir John Gorst, who was the guest of the evening, and the President of Magdalen College, Oxford (Mr. T. H. Warren). Several references were made to the prospect of the College ultimately developing into a university. The financial statement showed that during the past year the sum of £387 had been raised by the society and this will be devoted towards the completion of the buildings of University College.

Jan. 25th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Rectorial Address at the University of Edinburgh: Rowdy Behaviour of the Students.

THE Lord Rector of the University of Edinburgh, Sir Robert Finlay, M.P., appeared on Thursday, Jan. 21st, in the McEwan Hall to deliver the address which is expected from the person honoured by election to this high position. The chair was occupied by the Chancellor of the University, the Right Hon. A. J. Balfour, and he was supported and surrounded by much of the intellect of Edinburgh. The hall was crowded by those who were fortunate enough to have got tickets and by the students. The hour before the meeting was devoted to a students' concert. It was noisy and boisterous and the atmosphere did not augur well for the more serious ceremonial which was to follow. Even the Prime Minister's presence had no deterrent effect—only a few of the words he uttered in introducing the Lord Rector were audible. Sir Robert Finlay stood for nearly an hour before this great hall full of people and it is doubtful if 60 words were audible during the hour. There was a perfect pandemonium of noise of every conceivable description. The students behaved in a way that has made Edinburgh thoroughly ashamed of them and the University is metaphorically gnashing its teeth. The scene recalled those of a quarter of a century ago before the days of the Students Representative Council. That body must have either lost its power or it did not anticipate what happened.

The Students' Representative Council and the Rectorial Address.

A special meeting of the Students' Representative Council was held on Jan. 26th to consider the conduct of the students on the occasion of the rectorial address and to take steps to prevent its recurrence. The following motion was adopted:—

1. That the Students' Representative Council, in its own name and in the name of its constituents, resolves to place on record an expression of its deep regret at the continuous uproar that took place in the McEwan Hall on Thursday last and the consequent disgraceful treatment of the distinguished guests of the University and, in particular, of the vulgar and insulting incident that occurred at the close of the Lord Rector's address. 2. That after carefully considering the experience of Thursday last the Students' Representative Council would respectfully suggest to the Senatus Academicus that the seating arrangements for such occasions should be reconsidered, as that when 20 or more men who are determined to create a disturbance get together it is practically impossible for any number of stewards effectively to deal with them. 3. That the students' concert, which it was anticipated would have the effect of more or less exhausting the noisy enthusiasm of the audience, but which appears only to stimulate it, should be discontinued and that the audience should only be admitted a quarter of an hour or 20 minutes before the proper proceedings of the meeting commence. 4. That in view of the traditions attached to such gatherings it might be desirable that each professor a day before such meetings should point out to his students that the honour of the University on such occasions is very largely in their keeping and that the public naturally judge the whole institution by their conduct. 5. That the council ask one of its members to resign his seat on the Students' Representative Council on account of his unseemly conduct on Thursday last in having proceeded to the platform in company with a person who, it is understood, is not a student of the University and dressed in most unseemly fancy costume, and in making a disgraceful presentation to the Lord Rector, ostensibly in name of the students, for which he had not a vestige of any authority, and express disapprobation of the other person who accompanied him in unseemly fancy costume.

At the same meeting a letter was read from Sir Willliam Turner conveying a communication from the Principal and Deans committee on the same subject as follows:—

DEAR SIRS,—At a meeting of the Principal and Deans committee held this morning it was resolved to communicate with you regarding the conduct of a section of the students at the Lord Rector's address on Thursday. The disorder which prevailed throughout the ceremony has deeply shocked and offended public sentiment and the insults offered to the two distinguished men who fill the high offices of Chancellor and Rector of the University affect the honour and reputation of the students. Apart from the question as to what steps must be taken to prevent the recurrence of incidents so humiliating to the University, it is evident that no time should be lost in making a full apology for the discreditable proceedings in question. The committee cannot doubt but that you have given serious consideration to the matter and that in the interests of the students whose representatives

you are you will publicly disclaim all sympathy with conduct so disgraceful and will express unreservedly the deep-felt regret of the general body of students that incidents so deplorable in their character should have occurred. I remain, very faithfully yours,

WILLIAM TURNER, Principal.

Dundee Lunacy Board and the Superintendent.

At a meeting of the directors of the Dundee Asylum held on Jan. 18th Mr. A. B. Gilroy, who presided, drew attention to the resignation of Dr. James Rorie, medical superintendent of the West Green Asylum, stating that the committee of management, in consideration of his long and faithful services and the large amount of work imposed upon him by the transference of the asylum to the district lunacy board, had resolved unanimously to recommend that the board should grant him an honorarium of £1000. A special meeting of the board will be called on an early date to dispose of the matter.

The Opening of Kingseat Asylum.

At a meeting of the finance and law committee of the Aberdeen city district lunacy board held on Jan. 18th Dr. Charles Angus, medical superintendent of Kingseat Asylum, submitted a draft copy of the regulations and duties in regard to the officials of the institution. These were ordered to be printed and circulated amongst the members of the committee in order that they might be discussed at a subsequent meeting. The asylum will be ready for occupancy in the first week of April and the patients will be removed to their new home in the second week of that month.

Jan. 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Revaccination in Dublin.

No case of small pox is now under treatment in Dublin. The medical superintendent officer of health, Sir Charles Cameron, has addressed the following letter to the *Irish Times* from the Public Health Office, dated Jan. 22nd, 1904:—

SIR,—As small-pox now exists in Glasgow and several towns adjacent thereto and as persons from these towns frequently come to Dublin there is a possibility of the disease being imported into Dublin. I venture, therefore, to urge persons who have not been revaccinated to have that trifling but valuable operation performed on them. It is better that revaccination should be performed when small-pox is not prevalent than when it is.—Yours, &c.,

CHARLES A. CAMERON,
Medical Superintendent Officer of Health.

Readers of THE LANCET will remember that the last epidemic of small pox in Dublin proved to be trivial and abortive on account of the activity of the dispensary medical officers and those in charge of large public institutions in connexion with revaccination and to the fact that there exists no prejudice against vaccination or revaccination in Ireland in which antivaccination societies are unknown.

City Hospital for Diseases of the Skin, Dublin.

The annual meeting of the friends and supporters of the City Hospital for Diseases of the Skin and Cancer was held on Jan. 23rd when the new premises at 192, Great Brunswick-street were formally declared open by the Lord Mayor who presided. There was a large attendance which included Sir Francis R. Cruise, M.D. Dub., Sir Charles A. Cameron, C.B., M.D. R.U.I., and many others. Alderman Ireland in a short address mentioned that the hospital was non-sectarian and was open to the poor of the city and country. Dr. C. M. O'Brien subsequently demonstrated the method of applying the Finsen light, the x rays, and radium for the treatment of disease.

Royal Victoria Hospital, Belfast.

The Misses Riddel, Beechmount, Belfast, have increased their gift to the Royal Victoria Hospital by £2000—that is, they have given £10,000 to name a ward in memory of their brother, the late Mr. Samuel Riddel, and £2000 to build a residential house in the hospital grounds for the medical superintendent.

The Public Health Committee of Belfast.

On Jan. 14th Alderman Graham, M.D., presided for the last time, when the committee passed a special resolution expressive of the great loss the city of Belfast and its council had sustained by the retirement of Dr. Graham. Dr. J. King Kerr has been since appointed chairman of the committee.

Charge against a Dispensary Medical Officer.

At a meeting of the Moira district council on Jan. 21st Mr. T. H. Brownrigg, medical officer of Moira dispensary district (in reply to a charge made by a man that his sister had acquired fever, from which she died, from dealing in a shop kept open for the sale of groceries and milk), explained that when typhoid fever occurred in the house both the milk trade and the selling of grocery were promptly stopped by his direction and all communication with the house was cut off. The girl who died was smitten with the disease before any cases occurred in the shop. Mr. Brownrigg's explanation was unanimously regarded as satisfactory. It is most irritating to a medical man of the well-known reputation of Mr. Brownrigg to have publicity given to so groundless and absurd a report.

Epidemic of Blood Poisoning in Cootehill Workhouse.

A report was presented to the Cootehill board of guardians on Jan. 22nd by Dr. T. H. Moorhead, the medical officer of the workhouse, who pointed out that despite all his precautions erysipelas and similar septic diseases continually attack wounds and while killing some patients in the infirmary wards greatly retard the recovery of many others. He asks that an expert should be sent down to search for the cause and to suggest a remedy, as he has been beaten in his efforts to get rid of septic poison from the wards, about the sanitary state of which his opinions are too well known to the guardians to need repetition. A man who was operated on for cancer of the lip on Jan. 3rd developed erysipelas on the 5th and died. Two women were operated on upon Jan. 10th; of these one developed septic pneumonia on the 15th and died on the following day; the other is in a dangerous state from hospital gangrene. Another patient had a septic sore-throat. Every precaution known to modern surgery was used at these operations—the patients, the instruments, the dressings, and the hands of the surgeon and assistants were perfectly cleansed, so that Dr. Moorhead was thankful to say he was not to blame for these results. It was decided to ask the Local Government Board to send down an expert to inquire into the cause of the epidemic. The chairman said that there had been a good many complaints about the water-supply and sanitary arrangements.

Payment of Dispensary Medical Officers' Fees.

An influential deputation from the South Down branch of the Irish Medical Association waited on the Newry board of guardians on Jan. 23rd in regard to the remuneration of temporary substitutes for medical officers in the union. Dr. S. E. Martin (Newry) acted as spokesman and pointed out that the parent society—the Irish Medical Association—had laid down a rule that fair and reasonable remuneration for a temporary medical substitute for a dispensary officer (when the latter was on his holidays or sick leave) should be four guineas a week and in the case of workhouses three guineas a week. Practically all the dispensary medical officers, as well as the outside medical men in Newry and other unions of the district, were members of that Association and so were bound to hold to that rule, and as the practice of the Newry board of guardians was latterly to give only £3 a week, they felt in an awkward position and so appeared before them that day and asked the guardians to relieve them by increasing the honorarium to £3 3s. weekly in the case of workhouses and £4 4s. in the case of dispensaries. In reply to a guardian who said, "In short, you want us to increase the remuneration from £3 to £4" Dr. Martin said, "they preferred guineas. A medical man who once acted as temporary substitute in a dispensary in the Newry union once told him that it was fortunate he was paid in guineas because the odd shillings kept his pocket after he had paid car hire." One of the guardians gave notice to move in the matter which will come up in a fortnight.

The Midwives Act, 1902, and Irish Training Institutions.

At a meeting of the medical staff of the Incorporated Belfast Maternity Hospital on Jan. 19th, the following resolution was passed unanimously:—

That the Central Midwives Board be requested to alter their rules that any woman attending "The Incorporated Belfast Maternity Hospital" shall be deemed to have complied with their regulations in reference to the training of hospital midwives and shall be eligible to present herself for the examination of the Central Midwives Board.

Professor J. W. Byers was requested to forward this resolution to Dr. F. H. Champneys, chairman of the Central Midwives Board. The Incorporated Belfast Maternity Hospital, so far as regards two of the principal requirements demanded by the Central Midwives Board of candidates in reference to their training—viz., that they must have attended and

watched the progress of not fewer than 20 labours and have nursed 20 lying in women during the ten days following labour—finds itself in exactly the same position as the Rotunda, the Coombe, and the National Lying-in Hospitals, Dublin.[1] Patients leave the Belfast Lying in Hospital on the eight or ninth day (as in the Dublin hospitals) after delivery and it would be as impossible in the Maternity Hospital in Belfast as in those in Dublin to allow each nurse to have 20 cases for personal conduction. While every medical man is anxious that the training of the midwives of the future should be thorough, practical, and as much as possible based on personal experience, yet it is doubtful if a hard and-fast rule will in the end accomplish all this. In the Incorporated Belfast Maternity Hospital, where last year in the intern and extern departments 563 deliveries took place and where the training of the nurses extends over six months with theoretical teaching and a final examination, it is contended that the practical experience would be quite as good as if the nurses had fulfilled to the letter of the law the regulations of the Central Midwives Board. It is hoped that to meet the case of the Irish maternity hospitals the Central Midwives Board will make a change in its demands as to the certificates required from those nurses trained there who may wish to be admitted to its examination, so as to practise in England.

Jan. 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Protective Measures for the Health of the Nation.

IT being granted that the three great scourges of the human race are syphilis, tuberculosis, and alcoholism, M. Cazalis considers that ignorance is the principal factor in the influence exercised by these three. He therefore proposed at the meeting of the Academy of Medicine, which was held on Jan. 12th, that that body should draw up a scheme of short and simple instructions upon the dangers which these diseases bring about, both to society and to the individual, and that these instructions should be printed upon the back of every military certificate (*livret*). As every Frenchman at some time or other during his life is passed through a barrack, such instructions would necessarily be read by the soldiers and would almost certainly bring forth good fruit. Following up this idea M. Cazalis also asked that a code of instructions bearing upon the too little known subjects of the psychology, pathology, and the hygiene of marriage and conception should be printed on the back of every marriage licence given to those about to marry or to their parents. These instructions should also be drawn up by the Academy of Medicine. M. Cazalis also wished that a code of instructions for mothers and nurses upon the hygiene and feeding of infants should be distributed throughout the whole of France as they are already through Paris, where, following a proposal of M. Cazalis, the Municipal Council has distributed them to all the *mairies*. This publicity certainly works well and it is to be hoped that the idea of M. Cazalis will be adopted.

Bleeding in Cases of Severe Typhoid Fever.

M. Albert Robin and M. Gaultier recently communicated a paper on the above subject to the Therapeutical Society. In a case of typhoid fever complicated by heart failure, toxæmia, and insufficient oxidation bleeding, it was considered, should be tried for the following reasons. It should from the very first produce a loss of blood favourable to the exosmosis of intracellular poisons and then should make the pulse fuller and diminish venous stasis. It should further remove microbial poisons from the organism and also the waste products which have accumulated therein. But before all its use would appear to be to increase tissue change and respiratory activity. Success in a case in which this treatment was tried fully justified these presumptions, for the depletion of blood brought about just the improvement which it was hoped would follow.

Horseflesh in the Hospitals.

By order of M. Mesureur, the director of the Assistance Publique, a committee has just been appointed to inquire into the question of using horseflesh in the hospitals under the form of minced raw meat for the treatment of tuberculosis or other diseases. In support of this idea the official document sets out various reasons. Firstly, the great increase in the number of prescriptions for minced raw meat, which must be taken from the best parts, whereby the staff are placed at a disadvantage; secondly, the great saving which would be brought about owing to the low price of horseflesh; and finally, the wish expressed by several of the medical officers to make trial of horseflesh instead of beef. M. Mesureur and Dr. Debove, Dr. Faisans, Dr. Letulle, and others have been charged with putting the new idea into practice.

The Action of Roentgen Rays on Animal Tissues.

At the meeting of the Academy of Sciences held on Jan. 11th M. Lepine and M. Boulud communicated some interesting facts. They found that pieces of the pancreas of the dog when exposed to Roentgen rays showed a reducing power which was very much greater than that of some control fragments which were kept sheltered from the rays. The difference in one case was as much as 25 per cent. and the mean of five experiments was 12 per cent. Portions of the pulped liver of a dog exposed to the rays for under half an hour almost always showed less glycogen and more sugar than the control pulp, but the sum of the glycogen and the sugar was less. The first effect of the Roentgen rays is to increase hepatic glycogeny and glycolysis, but if exposure be prolonged for over one hour the conditions are reversed and these two processes are diminished. The same holds good in the case of the blood.

Jan. 28th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Drug Habit in the United States.

THE cocaine, morphine, and opium habits, in the opinion of those qualified to speak with authority, have enormously increased in the United States within the past few years. The cocaine habit in particular is most obviously becoming more and more common and in the South has already assumed alarming proportions. For the spread of the drug habit generally druggists are to a great extent responsible, as many of them for the sake of gain pander to the cocaine and narcotic trade. The leading druggists of America are now realising the growth of the drug evil and the incidental danger hanging over the profession of pharmacy and are taking the matter in hand vigorously. Indeed, during the past year either anti-cocaine or anti-narcotic laws were enacted in the States of Georgia, Illinois, Pennsylvania, and Texas. In addition, several cities especially in the South have enacted ordinances with the same end in view. The most important step, however, which has been taken to prevent unscrupulous druggists from selling cocaine and narcotics indiscriminately was that of the American Pharmaceutical Association a year or two ago. The association appointed a committee to make a thorough investigation of the situation and requested a well-known authority in pharmaceutical jurisprudence, Professor James H. Beal of Scio, Ohio, to draft a model or specimen measure. Professor Beal presented his draft at the last meeting of the association when it was thoroughly discussed and approved after it had been subjected to amendment. The measure in its present form should accomplish its intended object, as if passed druggists will be unable to sell narcotics or cocaine to any persons who are not legally entitled to prescribe such drugs. It is likewise the purpose of the American Pharmaceutical Association to have this measure given as wide publicity as possible and to have it enacted in the various State legislatures. The Beal measure has already been introduced into Congress as a part of a general Poison Bill and has been referred to the committee on the District of Columbia. As soon as the various State legislatures meet the Bill will also be introduced in at least six or seven of them. The lay and medical journals have also taken up the matter.

Caisson Disease in New York.

There have been recently in New York several fatal cases of caisson disease. In the United States in the past few years nearly 100 men have lost their lives from this complaint. The fatalities which have occurred in New York were the result of the sinking of the caissons on which to build the towers for the new Manhattan Bridge, designed to

[1] THE LANCET, Jan. 16th, 1904, p. 181.

connect New York with Brooklyn, between the Brooklyn Bridge and the lately opened Williamsburg structure. According to the *New York Herald* the most disastrous of all building operations in which it was found necessary to sink caissons was the New York East River gas tunnel where the men were at one stage working at a depth of 120 feet, under an air pressure of 52 pounds to the square inch, in addition to the normal atmospheric pressure of about 15 pounds. In the sinking of the caissons for the new Manhattan Bridge a depth of 92 feet has been reached, with an air pressure of 42½ pounds. There will be, however, no increase in the depth or in the air pressure. Dr. Andrew H. Smith of New York, the best-known authority on caisson disease in the United States, is of the opinion that a hospital should be established wherever caisson work is in progress, as a quick return to the conditions which induced the disease is, he deems, the best and nearly the only remedy for it. He therefore suggests that a chamber should be constructed in which a cot containing the patient could be placed and to which the compressed air could be admitted through a pipe connected with the caisson. After abatement of the symptoms the pressure should be very slowly reduced, as much as several hours being occupied in the process. Dr. Smith's advice will probably at once be acted upon.

Pneumonia in New York.

The 364 deaths occurred in New York from pneumonia for the week ending Jan. 9th, 143 more than recorded from the same cause for the corresponding week in 1903. 1635 deaths resulted from all causes in the week ending Jan. 9th of this year and of all the diseases which made up this large total pneumonia claimed by far the largest number of victims. Dr. William H. Guilfoy, registrar of records in the New York Department of Health, stated that of the 364 above-mentioned deaths from pneumonia 239 were due to lobar pneumonia and 125 to broncho-pneumonia. New York is also undergoing an epidemic of measles; 800 cases were reported for the week ending Jan. 9th and there were also 189 deaths. This fact will largely account for the prevalence of broncho-pneumonia, while influenza and the extremely cold weather recently experienced in New York will account for the many cases of, and fatalities from, lobar pneumonia.

Treatment of Cancer by Radium in New York: Remarkable Cases.

Dr. William James Morton, professor of electro-therapeutics at the New York Post-graduate Medical School, delivered a lecture on Radium at a meeting of the Technology Club held in New York on the evening of Jan. 13th. Dr. Morton stated that he was treating a number of patients for cancer and that by means of radium he had effected three cures. The lecturer described the treatment of patients internally as giving them doses of liquid sunshine and bathing the diseased parts with rays of the sun condensed into liquid form and liberated by the action of radium. Dr. Morton went on to say that certain solutions, such as quinine, asculin, and orcin, when exposed to the action of radium become fluorescent and give off the violet and ultra-violet light of the solar spectrum. If the patient takes one of these solutions and lets it become absorbed by the blood and blood-vessels the application of the x rays or radio-active rays to the diseased tissues will liberate the violet rays in the solution and give the tissues what is equivalent to a bath in sunshine. This actinic stimulus stirs up the sluggish system to the work of rebuilding healthy and normal tissues, but, like other kinds of stimulus, it ceases to be beneficial when given in too great quantities. So far as the cure of cases of cancer by means of radium reported by Dr. Morton is concerned, he stated that several medical men of good standing had examined the patients and pronounced the cures complete.

Jan. 16th.

Obituary.

JOSEPH RABUTEAU WELLAND, M.D. DUB.,

LIEUTENANT, R.A.M.C.

THE news of the death of Lieutenant Welland at the battle of Jidballi on Jan. 11th was received with profound regret by his many friends. The deceased officer was born on Sept. 19th, 1878, and so was little more than 25 years of age when his death occurred. He was educated at Rossall and entered Trinity College, Dublin, in 1895 where he speedily became known as a persevering student of an original turn of mind, always desirous of personally testing the teachings of his text-books or his professors. At Steevens's Hospital, where he was a resident in 1898, he was continually experimenting with drugs upon himself; just as at school, when he was learning chemistry, he would conduct experiments in his study by himself, no explosions—and they occurred—deterring him from finishing his research to his own satisfaction. He took his B.A. degree at the University of Dublin in 1899, and in the following year he was admitted M.B., B.Ch., B.A.O. In June, 1901, he joined the Royal Army Medical Corps and at the beginning of the next year he was ordered out to Somaliland where he was attached to the King's African Rifles. In April, 1903, he was invalided home and graduated M.D. in June of that year. In the November following he again went out to Somaliland where he received his death-wound at the post of duty, for the telegrams relating to the battle of Jidballi seem to indicate that he fell speared while attending to the wounded.

Lieutenant Welland took a keen interest in boating and the Dublin Boat Clubs have sustained a serious loss by his death. In the Michaelmas of 1899 he won the "Junior Pairs." The following year he was chosen stroke and on the advice of R. C. Lehmann was transferred to the stroking of the senior crew for the Henley Regatta and he acquitted himself in this position in a manner which gained for him the reputation of being the finest stroke seen in the club for a decade. He stroked the college eight against the Pennsylvania crew which came over to England in 1901 to row for the Grand Challenge Cup at Henley and whilst on leave in 1903 he stroked the Lady Elizabeth eight—a post-graduate Dublin crew—at the Boyne, University, Coleraine, and Waterford Regattas.

GEORGE EDMUND LEGGE PEARSE, F.R.C.S. ENG., L.S.A.

WE regret to announce the death of Mr. G. E. Legge Pearse, which took place at his residence, Homefield, Merton, Surrey, on Jan. 13th. Born in 1843, he was educated at Westminster School and subsequently entered as a medical student at Westminster Hospital, where he distinguished himself, taking the Chadwick prize besides several class prizes. After qualifying in 1864 as a Member of the Royal College of Surgeons of England, he spent two years at the Westminster Hospital, first as house physician and then as house surgeon, and later went to Manchester and became senior house surgeon to the Royal Infirmary there. Returning to London, he passed the final examination for the Fellowship of his College and was appointed demonstrator of anatomy at Westminster Hospital Medical School, afterwards becoming assistant surgeon and lecturer in surgery. He retired from active work about four years ago in consequence of ill-health. He was a Fellow of the Royal Microscopical Society, a Fellow of the Zoological Society, and a Member of the Pathological Society. He was also a contributor to the medical press.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Vasili Afanasieff, formerly lecturer on pathological anatomy in the Military Medical Academy, St. Petersburg.—Dr. Diego Coco, formerly *privat-docent* of internal pathology in Naples.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held in January the following candidates passed in the subjects indicated:—

Surgery.—R. S. Dollard, Royal College of Surgeons in Ireland and Westminster Hospital; P. Elias (Sections I. and II.), Amsterdam; B. C. Ghosh (Section II.), Cambridge; F. W. Higgs (Sections I. and II.), St. George's Hospital; and W. G. Kinton (Section I.) and J. W. Watson (Section II.), Manchester.

Medicine.—W. V. Braddon (Sections I. and II.), Cambridge and Manchester; F. H. Hand (Section II.) and J. D. Keir (Section II.), St. Mary's Hospital; W. G. Kinton (Section I.), Manchester; E. H. Price (Sections I. and II.), Birmingham; A. Rogers (Section II.), Cardiff and St. Mary's Hospital; A. Turner (Sections I. and II.), Charing Cross Hospital; and S. Zweiback Section I.), Königsberg.

Forensic Medicine.—F. H. Hand, St. Mary's Hospital; W. G. Kinton Manchester; and A. Turner, Charing Cross Hospital.

Midwifery.—H. Archer, Leeds; C. H. J. Fagan, St. George's Hospital; W. S. Lewis, Birmingham; and P. B. Whitington, London Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—W. V. Braddon, R. S. Dollard, P. Elias, B. C. Ghosh, J. D. Keir, W. S. Lewis, and A. Turner.

TRINITY COLLEGE, DUBLIN.—At examinations held in Hilary term the following candidates were successful:—

PREVIOUS MEDICAL EXAMINATION.

Anatomy and Institutes of Medicine.—William G. Harnett, William C. Mac Fetridge, Joseph H. Elliott, and Robert E. Dunn.

Physics and Chemistry.—William F. Casey, William F. Samuels, and Hercules J. Knox.

Botany and Zoology.—James C. C. Hogan, Rupert Magill, Robert L. Lee, Denis J. Stokes, Alexander K. Cosgrave, John R. Morton, John A. L. Hahn, and William F. Casey.

MEDICAL MAGISTRATE.—Mr. George Philip Francis, L.R.C.S. Edin., L.A.H. Dub., of Brecon, has been placed upon the commission of the peace for Breconshire.

CENTENARIANS.—Mrs. Brembridge of Sidmouth, Devon, celebrated her 103rd birthday on Jan. 21st. She is the widow of the late Mr. R. Brembridge, Member of Parliament for Barnstaple, at which town she was born in 1801.—Mr. Henry Wilkinson who died recently at Newby Wiske, near Northallerton, celebrated his 100th birthday on Oct. 23rd, 1903. On this occasion the local members of the Wesleyan body, to which he belonged, held special services and presented him with a sum of money. He had eight children, of whom only one (now aged 75 years) is living.

LITERARY INTELLIGENCE.—Messrs. Wright and Co. of Bristol have in the press a small work written by Dr. W. G. Sutherland entitled "Dispensing Made Easy, with Numerous Formulæ and Practical Hints to Secure Simplicity, Accuracy, and Economy." It is designed specially for the dispensing medical practitioner and is the result of observations made while the writer was acting as locum-tenent in over 100 different practices in England and Wales.—Mr. Alban Doran, after having played a prominent part in establishing the *Journal of Obstetrics and Gynæcology of the British Empire*, has resigned the editorship of that periodical. Dr. T. W. Eden has been appointed to fill his place.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, WATERLOO-ROAD, S.E.—The great Royal Opera House ball on behalf of the above hospital will take place on Tuesday next, Feb. 2nd. We understand that all grand tier boxes have long since been disposed of and that two supper tables and one second tier box only are left unsold. Large dinner parties for this ball have been arranged at the Hotel Cecil and other well-known restaurants by the following: Her Royal Highness Princess Hatzfeldt-Wildenburg, Her Royal Highness Princess Alexis Dolgorouki, the Duchess of Manchester, the Duchess of Portland, the Duchess of Wellington, the Duchess of Sutherland, the Marchioness of Winchester, the Marchioness of Sligo, the Countess of Derby, the Countess of Airlie, the Countess of Leven and Melville, the Countess of Aberdeen, Countess Cowper, the Countess of Portsmouth, Countess Cadogan, Countess Howe, Lady Denman, Lady Cheylesmore, Lady O'Hagan, Lady Llangattock, Lady Vincent, Lady Pearson, Miss Moresby Chinnery, Miss Drummond, Miss Meyer, Miss Phipps-Hornby, Miss Ronalds, and Miss Harmsworth. This children's hospital, so far as can be ascertained, is the oldest of its kind in the civilised world and has already relieved over a million patients. On this account alone it deserves all possible assistance in raising the £50,000 required for rebuilding.

LECTURES ON MEDICAL JURISPRUDENCE.—On Jan. 21st the second of a course of lectures on medical jurisprudence was delivered by Dr. F. J. Waldo, coroner for the City of London, at the Old Hall, Lincoln's Inn. The lecturer dealt with "Live Birth in Relation to Civil and Criminal Law," a subject of great importance to lawyers. The consideration of live birth, he said, was naturally divided into two classes—namely, those which affected either civil cases of inheritance or criminal cases of infanticide. In both the evidence that established the fact of live birth was identical. The medical view of live birth differed from the legal. The medical man demanded proof of the establishment of circulation and of respiration even when the child had not been born into the world. In this way crying was one of the most satisfactory proofs of respiration and hence, to the medical mind, of live birth. The law, on the other hand, was content with the faintest sign of vitality, provided the child was fully born into the world, as establishing the fact of live birth. The tremor of a muscle or the quiver of an eyelid might be sufficient evidence of live birth from the legal point of view. The positive signs of live birth, as laid down by Casper, were next discussed and the crucial point of viability or the capacity of a child to survive birth was treated at some length. The remaining lectures of the course will be delivered on subsequent Thursdays. They deal with death in its medico-legal relations, insanity, and poisons.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.

The Principles and Practice of Hydrotherapy. A Guide to the Application of Water in Disease. For Students and Practitioners of Medicine. By Simon Baruch, M.D., Professor of Hydrotherapeutics in the New York Post-Graduate Medical School and Hospital. Second edition, revised and enlarged. Price 16*s.* net.

BAUERMEISTER, F., 49, Gordon-street, Glasgow. (FERDINAND ENKE, Stuttgart.)

Elektropathologie. Die Erkrankungen durch Blitzschlag und Elektrischen Starkstrom in Klinischer und Forensischer Darstellung. Von Dr. S. Jellinek, Assistent des k.k. Krankenhauses Wieden in Wien. Price M.9 or 9*s.*

COBLENTZ, OSCAR, Maassenstrasse, 13, Berlin, W.

Das angeborene Kehlkopfdiaphragma. Von Dr. Johann Fein, Regimentsarzt in Wien. Price M.2.40.

GLAISHER, HENRY J., 57, Wigmore-street, Cavendish-square, W.

Frondes Caducæ. By Montagu Lomax. Price 3*s.* 6*d.* net.

HAZELL, WATSON, AND VINEY, LIMITED, 52, Long-acre, W.C.

Hazell's Annual for 1904. A Cyclopædic Record of Men and Topics of the Day. Nineteenth year of issue. Price 3*s.* 6*d.* net.

HURST AND BLACKETT, LIMITED, 13, Great Marlborough-street, W.

A Study of British Genius. By Havelock Ellis. Price 7*s.* 6*d.* net.

JOHN BALE, SONS, AND DANIELSSON, LIMITED, 83-89, Great Titchfield-street, Oxford-street, W.

A Revision of the Anophelinæ. Being a First Supplement to the Second Edition of "A Handbook of the Gnats or Mosquitoes," by Lieutenant-Colonel G. M. Giles, M.B., F.R.C.S., I.M.S. (retired). Price 2*s.* 6*d.* net.

JOHNSON, R. BRIMLEY, 4, Adam-street, Adelphi, W.C.

The Food of the Gods (*θεοβρῶμα*). A Popular Account of Cocoa. By Brandon Head. Price 3*s.* 6*d.*

KARGER, S., Karlstrasse, 15, Berlin, N.W.

Das Eindringen der Tuberkulose und ihre Rationelle Bekämpfung. Nebst kritischen Bemerkungen zu E. v. Behrings Tuberkulosebekämpfung. Von Dr. Hugo Beckmann, Berlin. Price M.1.

Die Errichtung Geburtshilflicher Poliklinikan an Hebammenschulen. Ihre Bedeutung für die Ausbildung der Hebammen und für die Allgemeine Hygiene. Von Dr. Fritz Frank, Direktor der Prov. Hebammenlehranstalt in Köln. Price M.1.–

KEMP AND COMPANY, LIMITED, Chemists, Sassoon House, Elphinstone Circle, Bombay.

Kemp and Co.'s Prescribers' Pharmacopœia. A Synopsis of the more recent Remedies, Official and Unofficial, with a Therapeutic Index. Fifth edition. Price not stated.

MORTON, GEORGE A., 42, George-street, Edinburgh. (SIMPKIN, MARSHALL AND CO., LIMITED, London.)

The Life history of British Lizards and Their Local Distribution in the British Isles. By Gerald R. Leighton, M.D., F.R.S.E., Author of "British Serpents," Editor of "The Field Naturalist's Quarterly," &c. Price 5*s.* net.

MURRAY, JOHN, 50A, Albemarle-street, W.

A Manual of General Pathology for Students. By Sidney Martin, M.D., F.R.S., F.R.C.P., Professor of Pathology at University College; Physician to University College Hospital. Price 15*s.* net.

NAUD, C., 3, Rue Racine, Paris.

Introduction à l'Étude de la Médecine. Par G. H. Roger, Professeur agrégé à la Faculté de Médecine de Paris, Médecin de l'Hôpital de la Porte d'Aubervilliers. Deuxième édition, revue et considérablement augmentée. Price not stated.

PENTLAND, YOUNG J., Edinburgh and London.

Manual of Surgery. By Alexis Thomson, M.D., F.R.C.S. Edin., Assistant Surgeon, Edinburgh Royal Infirmary; Surgeon to the Deaconess Hospital, Edinburgh; and Alexander Miles, M.D., F.R.C.S. Edin., Assistant Surgeon, Edinburgh Royal Infirmary; Surgeon to Leith Hospital. Volume I. General Surgery. Price not stated.

REBMAN, LIMITED, 129, Shaftesbury-avenue, W.C.

Functional Diagnosis of Kidney Disease with Especial Reference to Renal Surgery. Clinical Experimental Investigations by Dr. Leopold Casper, Privat-docent an der Universität, and Dr. Paul Friederich Richter in Berlin. Translated by Dr. Robert C. Bryan of Richmond, Va., and Dr. Henry L. Sanford of Cleveland. Price 7*s.* net.

Mammalian Anatomy with Special Reference to the Cat. By Alvin Davison, Ph.D., Ex-Fellow of Princeton University, Professor of Biology in Lafayette College. Price 7s. net.

Text-book of Diseases of the Eye. For Students and Practitioners of Medicine. By Howard F. Hansell, A.M., M.D., Clinical Professor of Ophthalmology, Jefferson Medical College, and William M. Sweet, M.D., Demonstrator of Ophthalmology, Jefferson Medical College. With Chapters by Christian R. Holmes, M.D., Casey A. Wood, M.D., D.C.L., Wendell Reber, M.D. Price 17s. net.

SAMPSON LOW, MARSTON, AND COMPANY, LIMITED, St. Dunstan's House, Fetter-lane, Fleet-street, E.C.

The Guide to South Africa. For the use of Tourists, Sportsmen, Invalids, and Settlers. With coloured maps, plans, and diagrams. Edited annually by A. Samler Brown and G. Gordon Brown for the Union Castle Mail Steamship Company, Limited. 1903-1904 edition. Price 2s. 6d.

SAUNDERS, W. B. AND CO., 9, Henrietta-street, Covent-garden, W.C.

The Treatment of Fractures. With notes upon a few common dislocations. By Charles Locke Scudder, M.D., Surgeon to the Massachusetts General Hospital. Fourth edition, thoroughly revised. Price 21s. net.

SMITH, ELDER, AND CO., 15, Waterloo-place, S.W.

The Management of Lateral Curvature of the Spine, Stooping, and the Development of the Chest in Phthisis. By E. Noble Smith, F.R.C.S. Edin., &c., Senior Surgeon to the City Orthopædic Hospital, London. Price 2s. 6d.

SPRINGER, JULIUS, Monbijouplatz, 3, Berlin.

Leitfaden der Therapie der inneren Krankheiten, mit besonderer Berücksichtigung der Therapeutischen Begründung und Technik. Von Dr. J. Lipowski. Zweite verbesserte und vermehrte Auflage. Preis, geb., M.4.—

Mikroskopie und Chemie am Krankenbett. Von Dr. Hermann Leuhartz, Professor der Medizin und Direktor des Eppendorfer Krankenhauses in Hamburg. Vierte, wesentlich umgearbeitete Auflage. Preis, geb., M.8.—

WILLIAMS AND NORGATE, 14, Henrietta-street, Covent-garden, W.C.

Studies in Heterogenesis. By H. Charlton Bastian, M.A., M.D. Lond., F.R.S. (With 815 Illustrations from Photomicrographs.) Price 31s. 6d.

WOODALL, MINSHALL, THOMAS, AND CO, Caxton Press, Oswestry and Wrexham.

Bettws-y-Coed as a Health Resort. By a Member of the Medical Profession. Price 1s.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BENNETT, KENNETH HUGH, M.R.C.S., L.R.C.P. Lond., D.P.H., has been appointed Honorary Medical Officer to the West Cornwall Infirmary and Dispensary.

BULLMORE, CHARLES CECIL, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the Workhouse and Falmouth district by the Falmouth Board of Guardians.

CROSSMAN, EDWARD, M.D. Durh., M.R.C.S., L.R.C.P. Lond., L.S.A., has been reappointed Medical Officer of Health of the Barton Regis Rural District Council.

GARTRELL, JOHN HERBERT, L.D.S. Eng., has been appointed Honorary Dental Surgeon to the West Cornwall Infirmary and Dispensary, Penzance.

HARMER, W. D., M.C. Camb., F.R.C.S. Eng., has been appointed Surgeon to the Metropolitan Hospital, Kingsland road, N.E.

HAY, JOHN, M.D., Ch.B. Vict., M.R.C.S. Eng., M.R.C.P. Lond., has been appointed Physician to the Liverpool Stanley Hospital.

HEILBORN, W. E., M.B., B.C. Cantab., has been appointed Honorary Assistant Medical Officer to the Bradford Children's Hospital.

HERN, GEORGE, L.R.C.S. Lond., M.R.C.S., L.D.S. Eng., has been appointed Dental Surgeon to the Royal Dental Hospital of London.

OUSTON, THOMAS GEORGE, F.R.C.S. Eng., L.R.C.P. Lond., has been appointed a Medical Referee under the Workmen's Compensation Acts, 1897 and 1900, and to act for the Morpeth and Blyth, North Shields, Newcastle, Gateshead, Hexham, and Bellingham Districts in County Court Circuit No. 1.

PORTER, W. GEORGE, M.D. Brux., M.R.C.S., F.R.C.P. Lond., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

PRAIT, J. DALLAS, M.D. Dub., F.R.C.S.I., has been appointed Certifying Surgeon under the Factory Act for the Dublin District of the county of Dublin.

RIDDELL, J. SCOTT, C.M. Aberd., has been appointed Additional Examiner in Clinical Surgery, Edinburgh University.

ROUS, J. B., L.R.C.P., M.R.C.S., has been appointed House Surgeon to the Hastings, St. Leonards, and East Sussex Hospital.

SCRASE, JAMES, M.R.C.S., L.R.C.P., has been appointed Honorary Medical Officer to the Newton Abbot (Devon) Hospital.

WALKER, ALFRED, M.A., M.D., B.C. Cantab., has been appointed Honorary Medical Officer to the Budleigh Salterton (Devon) Cottage Hospital.

WARING, H. J., M.S. Lond., F.R.C.S. Eng., has been appointed Consulting Surgeon to the Metropolitan Hospital, Kingsland-road, N.E.

WATSON, C. GORDON, F.R.C.S. Eng., has been appointed Assistant Surgeon to the Metropolitan Hospital, Kingsland-road, N.E.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRKENHEAD UNION INFIRMARY, WORKHOUSE, AND SANATORIUM.—Resident Assistant Medical Officer. Salary £120 per annum, with board, washing, and apartments.

BRISTOL ROYAL INFIRMARY.—Resident Junior House Surgeon and Anæsthetist; also Resident Casualty Officer, both for six months. Salaries at rate of £50 per annum, with board, lodging, and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—Assistant Surgeon.

CHARING CROSS HOSPITAL.—Medical Officer in charge of the Electrical Department.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Two House Physicians for six months. Salary at rate of £50 per annum, with board, washing, and residence.

DUBLIN, RICHMOND DISTRICT ASYLUM.—Two Clinical Assistants. Salary £60 per annum, with apartments and full rations.

GLOUCESTER, BARNWOOD HOUSE HOSPITAL FOR MENTAL DISEASES.—Junior Assistant Medical Officer. Salary at rate of £150 a year, rising to £170, with board, &c.

GLOUCESTER GENERAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeoncy for six months. Remuneration at rate of £30 per annum, with board, residence, and washing.

GORDON HOSPITAL FOR FISTULA, ETC., Vauxhall Bridge-road, S.W.—House Surgeon. Honorarium £15 15s. for six months, or £40 for twelve months, with board and residence.

HAMPSTEAD GENERAL HOSPITAL.—Resident Medical Officer for six months, eligible for re-election. Salary at rate of £120 per annum, with rooms, coals, and gas.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence.

INVERNESS DISTRICT ASYLUM.—Medical Superintendent. Salary £500, with house, fire, light, &c.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £100 per annum, with board and apartments.

LONDON HOSPITAL, Whitechapel road, E.—Two Honorary Senior Clinical Assistants (Aural).

MANCHESTER, ANCOATS HOSPITAL.—Resident House Physician. Salary £80 per annum, with board, residence, &c.

MANCHESTER, COUNTY ASYLUM, Prestwich.—Junior Assistant Medical Officer, unmarried. Salary £150, increasing to £250, with board, apartments, and washing.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST, Hardman-street, Deansgate, Manchester, and Bowdon, Cheshire.—Honorary Physician. Also Honorary Assistant Physician.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Assistant Surgeon.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—Assistant House Surgeon, unmarried. Salary £75 per annum, with bed, board, and washing.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury.—Junior House Physician. Salary £50 a year, with board and residence. Also Registrar. Honorarium of 50 guineas per annum.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W. Convalescent Home, "Fair View," Slough, Bucks.—Surgeon to Out-patients.

STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon, for six months. Honorarium of £40, with board, residence, &c.

TOTTENHAM HOSPITAL.—House Physician for six months. Salary £60 per annum, with board, residence, and laundry.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon. Salary £75 per annum, with board, residence, &c.

WORCESTER GENERAL INFIRMARY.—House Surgeon. Salary £70 per annum, with board and residence.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £120 a year, with board, lodging, and attendance.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory Act at Clevelon, in the county of Somerset, at Watton, in the county of Norfolk, and at Ballachulish, in the county of Argyll.

Births, Marriages, and Deaths.

BIRTHS.

ACLAND.—On Jan. 17th, at Christchurch, New Zealand, the wife of Hugh Dyke Acland, F.R.C.S., of a son.

YELD.—On Jan. 22nd, at Gloucester-road, Regent's-park, the wife of Walter H. Yeld, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

DEATHS.

BARNARD.—On Dec. 7th, 1903 at Wanganui, New Zealand, after a bicycle accident, Richard Barnard, B.A., B.C., King's Coll. Camb., late Surgeon R.N., youngest son of the late William Barnard of Harlow, Essex, and the late Mrs. Barnard of 49, Argyll-road, Kensington, aged 40 years.

KIDD.—On Jan. 23rd, at Hampstead, aged 18 years, Geoffrey, eldest child of Leonard Kidd, M.D., of 15, George-street, Hanover-square, W.

NELSON.—On Jan. 18th, at Helmsley House, Stamford Bridge, Yorkshire (very suddenly), George Robert Nelson, Surgeon, youngest son of the late George Dawson Nelson, M.D., aged 46 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE LAW UNION AND CROWN INSURANCE COMPANY AND ITS MEDICAL EXAMINERS.

A MEDICAL examiner for the Law Union and Crown Insurance Company has received the following letter, concerning which he seeks an opinion:—

Dr. ——, Walsall.

DEAR SIR,—As you are doubtless aware it has hitherto been a custom of this office to pay our medical examiners a fee of £1 1s. in every case where their professional services are required quite irrespective of the amount of the assurance. It has been pointed out to me by my chief office that while they have no desire to undervalue the important services rendered to us by our medical advisers or to unduly limit the fee in recognition of the same, we are compelled, by the heaviness of the burden of a guinea fee on proposals of £200 and under, to fall into line with the majority of other companies and arrange for a fee of 10s. 6d. in these very small cases. We consider it only due to you to ask whether you would be disposed to accept the smaller fee when the amount is £200 and under, as otherwise we would propose to place them before another doctor who would be content with that remuneration.

We quite recognise that the service which you would render us is the same, whether the assurance be large or small; but for the latter £1 1s. fee taken in connexion with other necessary expense leaves no balance from the first year's premium to cover the risk undertaken.

We do not in the least wish to press on our medical advisers the acceptance of the smaller fee but content ourselves with putting the position before them. Would you kindly drop me a line at your earliest convenience stating whether you would be willing to fall in with our arrangements?

I am, dear Sir, yours faithfully,

Birmingham, Jan. 15th, 1904. —— ——, District Manager.

In the medical man's opinion the document speaks for itself. "What position," he asks, "should members of the profession assume in face of such proposals for 'sweating' overworked and underpaid medical men? The company, from the investment list I forward herewith, appears prosperous and wealthy." Our advice to our correspondent is that he should "drop" the district manager the requested "line" offering to drop all connexion with the company if the proper fee is not paid. This is the view taken by a well-known physician in the Midlands who on receiving the district manager's letter replied: "I am sorry that I am unable to comply with your request and accept a reduced fee. If your office is in such a bad way I would suggest the wisdom of reducing your expenses in other directions." It is sadly true that the company will possibly be able to procure medical examiners willing to accept the 10s. 6d. fees, but the thrift will not profit it. Possibly the company is not so prosperous as the figures in the investment list suggest, and economy in these days of competition is forced upon it. But in such a contingency there is no reason why money should be saved at the expense of the medical man, without whose assistance the company could not work at a profit at all.

ALVUS ADSTRICTA.

To the Editors of THE LANCET.

SIRS,—May we not find a cause of cancer in the above? I am led to this thought by inquiring of cancer and other patients as to their habit of going to stool. A large percentage of people never go to stool at all. They go only when driven there by some aperient. They are strangers to the gratifying sensation of a respectable, regular after-breakfast motion. The constant absorption of liquid fæcal matter, leaving a kind of compact "sawdust" behind, cannot but have an effect upon active cell life, producing changes leading to increased action and ultimate madness of rapid multiplication. It may be remarked that every constipated individual does not get cancer. Does every person exposed to the tubercle bacillus get tubercle? Certainly not; only a certain number fall by the way.

I am, Sirs, yours faithfully,

ISAAC GEORGE, D.P.H.R.C.P.S.Eng.

Widegate-street, Bishopsgate, E.C., January, 1904.

A DIET TREATMENT.

To the Editors of THE LANCET.

SIRS,—A friend of mine in British Columbia writes me that he has been taking treatment *by correspondence* from a New York physician. The treatment lasts three months and costs $25.

The victim is a journalist, aged 40 years, with a family history of tuberculosis. He is rather thin and is taking the treatment with the object of putting on weight. He describes the treatment thus:—Breakfast: two raw eggs and the juice of an orange, quart of milk and piece of uncooked wheat bread. Luncheon: one quart milk and two ounces shelled almonds. Dinner: one quart milk, two pieces uncooked bread. Supper: one quart milk. First thing in the morning he takes one quart warm water containing one teaspoonful bicarbonate of soda and one of common salt; kneads the bowels five minutes, then vomits as much as possible; then a tepid bath, rub off and personal massage. In conjunction with the above he takes vibratory exercises night and morning and rope-skipping. He has not tasted cooked food of any kind for two months and has lost all taste for it. His weight is increasing slowly after about two months' treatment. He finds the treatment makes him very lazy.

Will you be kind enough to tell me what you think of this treatment? Do you think one would be apt to gain weight by adopting it?

I am, Sirs, yours faithfully,

Jan. 20th, 1904. AINSWORTH.

*** In the absence of further details we cannot undertake to say whether the treatment is suitable for the case or not. We do not think that a person adopting such diet would be likely to gain weight.—ED. L.

A DANGER IN PUBLIC BARBER, MANICURE, AND CHIROPODIST SERVICE.

Dr. Frederic Griffith, of 49, East Sixty-fourth-street, New York, Fellow of the Academy of Medicine, has sent us an article on the above subject of which the following is the principal portion:—

"The barber, the manicure, and the chiropodist are a trio of worthies who stand equally in need of education in some simple matters of cleanliness (from the surgeon's standpoint) in the crafts which they pursue. Transfer of the various kinds of purulent and specific infection being so readily accomplished from one person to another at the common meeting places of the public in the shops of these individuals it seems expedient to draw professional attention to the matter with the object in view that discussion being once aroused amongst medical men a quick remedy will be applied to the evil. From time to time cases of syphilitic invasion through the offices of the barber's implements of trade have been recorded. The following is a history of pus infection of a customer's fingers after treatment by a manicure. A man, aged 52 years, had been in the habit for some time past of having his hands cared for at a professional manicure establishment. Directly after his last visit he experienced a feeling of 'soreness' about the ends of three of his fingers which was followed by well-marked signs of inflammation during the course of the next two days. Early treatment consisted in rest of the extremities by slinging, frequent hot water bathing of the parts, and purgation. Two of the fingers recovered during the course of a week. The third, which was the index finger of the right hand, continuing to grow worse was incised under cocaine anæsthesia, using a ½ per cent. alkaline solution of the drug. Sloughing of the cellular tissue about the root of the nail had occurred, but prompt restoration took place after the operative interference. In New York city the sanitary code provides for the conduct of barber shops. By means of printed cards supplied by the department the barber is officially directed to keep his shop swept clean, to use a towel for but one person without being washed, and to discard powder puffs and sponges. He is forbidden to treat skin diseases unless he is a licensed physician. The implements of trade are required to be thoroughly washed or dipped in boiling water or other germicide after using. The chiropodists during the last ten years have, by means of legislative enactment as to the necessary qualifications of an individual desiring to enter the calling, endeavoured to limit their numbers and to prevent the active competition of the barbers who in many instances did previously and in a number of cases still continue to treat the corns and bunions of their patrons. Official notice of neither the chiropodist nor the manicure, however, is taken by the health department of the municipality, the reply which I received from one of the department clerks when asked concerning this matter being 'Oh, we don't bother them people.'

That there is a distinct need for supervision of the various manicure and chiropodist establishments by a city's health officers can be shown by a visit to any of the places in question. The chief dereliction of these people is in the most important matter of all—namely, the lack of proper sterilisation of their implements; directions to barbers in New York city are also inadequate as the mere 'dipping' after washing of a used instrument into boiling water or one of the ordinary dilute germicides employed is insufficient to destroy all germ life contaminating it or positively to insure against transfer of syphilitic virus."

THE LATEST PHASE.

To the Editors of THE LANCET.

SIRS,—My attention has been directed to a paragraph in THE LANCET of Jan. 16th, p. 204, under the heading "The Latest Phase." I shall be glad if you would give publicity to the fact that the person referred to therein as "Templeton, 13, Cobden-road, Brighton," is *not* on the Registers of Pharmaceutical Chemists or Chemists and Druggists of Great Britain. Your assumption that the person held up to comment is a pharmaceutical chemist is therefore without foundation.

I am, Sirs, yours faithfully,

R. BREMRIDGE, Secretary of the Pharmaceutical Society of Great Britain.

Bloomsbury-square, W.C., Jan. 18th, 1904.

*** We publish this disclaimer with pleasure.—ED. L.

THE WEARING OF MEDALS BY EX-CIVIL SURGEONS.

To the Editors of THE LANCET.

SIRS,—In reply to Ex-Civil Surgeon's queries *re* his South African medal, he can with good taste wear it when in evening dress but it should be in miniature form with ribbon attached. The War Office some 16 years ago sanctioned the wearing of medals by officers when in evening dress, and the custom is followed by many officers, from the Commander-in-Chief downwards, when attending public dinners, &c.

I am, Sirs, yours faithfully,

Jan. 25th, 1904. I. M. D.

THE HICKMAN REWARDS.

THE £100 reward offered by Mr. Hickman and the £100 offered by the board of the Royal Free Hospital for the discovery of the late Miss S. F. Hickman have, we are authorised to state, now been paid. The money has been applied as follows—viz.: £5 paid to the lad, H. W. Mackinney, who first gave information to the police, and £5 to the boy's father for clothing and necessaries. The balance of £190 will be invested by the Mayor and Vicar of Richmond in Government stock, in trust, as to £95 for the boy Mackinney, and £50 each for Fennell and Watkins, the two boys who were with Mackinney in the plantation. The interest of these sums is to be applied for the benefit of the boys until they attain the age of 21 years and the principal then is to be paid to them.

BIRD "PRESERVING."

IN THE LANCET of Jan. 16th, p. 203, we recorded the humanity and the interest in ornithology displayed by Mr. E. Symonds, a game keeper, who saw a wax-wing and did not shoot it. But the usual idiot with a gun has turned up and Mr. E. Kay Robinson writes to the *Times* of Jan. 26th that according to the press of Jan. 21st "a wax-wing has been shot near Beccles." It is difficult to speak politely of the person who committed this act but let us hope that he was simply an ignoramus, not a collector.

A CASE OF ACUTE TRAUMATIC CHOLECYSTITIS.

To the Editors of THE LANCET.

SIRS,—In the case of acute traumatic cholecystitis reported by Dr. F. J. Smith and Mr. C. W. Mansell Moullin in THE LANCET of Jan. 23rd, p. 220, might not the injury have been caused by the man falling with his right arm under him? The internal condyle of the humerus in that position is opposite the gall-bladder.

I am, Sirs, yours faithfully,

F. F. JONES, M.R.C.S. Eng., L.S.A.

Twerton-on-Avon, Bath, Jan. 26th, 1904.

A WARNING TO MEDICAL MEN APPLYING FOR SHIPS' SURGEONCIES.

To the Editors of THE LANCET.

SIRS,—I obtained an appointment as ship's surgeon through an agent who introduced me to the shipping firm's superintendent and they both told me that the voyage would be for six months. I unfortunately signed the ship's articles without putting in a special clause as I trusted to the statements made to me at the time of engagement. I was kept at sea for nearly a year and I might have been detained for two years but luckily the steamer was ordered back to England. I was refused permission to leave at the end of six months by the captain on any other condition than that I found a substitute, which was impossible. I was informed by the shipping firm when I returned that they entirely ignored any responsibility in the matter and that as I had signed the ship's articles they were entitled to my services for two years at £6 a month, unless the steamer returned within that time, and that the contract made with the agent did not concern them. I write this to warn others who may be similarly placed not to sign the ship's articles without inserting an extra clause if necessary.

I am, Sirs, yours faithfully,

Jan. 23rd, 1904. LATE SHIP'S SURGEON.

Scrutator.—1. The patient is apparently "in such circumstances as to require relief for his proper care" and must therefore be dealt with as a pauper by the relieving officer under Section 14 (2) of the Lunacy Act, 1890. 2. The justice before whom the alleged lunatic is brought may call in any registered medical practitioner to examine such alleged lunatic and is not bound by any contract between the guardians and their medical officer. In practice, however, justices are accustomed tacitly to sanction contracts of this kind. Unless, therefore, there are special circumstances which would lead the justice to ignore the medical officer of the district "Scrutator" is not likely to be asked to certify. 3. The justice's order is in Form 12 of the second schedule of the Act. 4. Children "being of a sufficient ability" are liable for the maintenance of a parent. The extent of the claim made is at the discretion of the guardians.

A. B. C.—We consider that the proposer should be told of his condition. He will be to some extent prepared for the bad news by the fact that the insurance company, upon our correspondent's report, will certainly either refuse his life or only accept him upon very high rates. We think that the proposer might be told in general terms that the result of the investigation is to show him to be not a first-class life, while he should be advised to consult his own medical man with regard to particulars. These particulars could be communicated by "A. B. C." in confidence to the proposer's own medical man.

W. J. B.—Radio-active rays are not in the ordinary sense visible to the eye. Their existence must be made manifest by a fluorescent substance. The gleaming of the cat's eye presumably acts as a warning to the prey.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (3rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (4th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat, (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (6th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (1st).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—9 P.M. Mr. C. B. Lockwood: Aseptic Surgery in Theory and Practice. Lecture I.—Introductory. (Lettsomian Lecture.)

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND (London School of Medicine for Women, Hunter street, W.C.).—4 P.M. Specimens will be shown by Mr. R. H. Burne. Paper:—Prof. J. Symington: Grattan's Craniometer and Craniometric Methods. Discussion on the Best Practical Method of Locating in the Living Subject (1) the Pylorus, (2) the Duodeno-jejunal Flexure, (3) the Hila of the Kidneys, (4) the Commencement of the Pelvic Colon; also on the Unreliability of the Costal Arch as a Guide for Surface Marking, opened by Dr. C. Addison).

TUESDAY (2nd).—PATHOLOGICAL SOCIETY OF LONDON (Lister (Jenner) Institute, Chelsea-gardens).—8.30 P.M. Mr. H. G. Plimmer: The Organisms of Monkey Malaria and Sleeping Sickness.—Dr. A. Paine: Iron Hæmatoxylin Staining.—Mr. S. Rowland: Mechanism of Agglutination of Typhoid Bacilli. Mr. J. A. Craw: Agglutination. Dr. C. J. Martin: A Modified Riva-Rocci Apparatus for the Clinical Determination of Blood-pressure. And other exhibits.

WEDNESDAY (3rd).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Annual Meeting. Specimens:—Mrs. Scharlieb: Unruptured Tubal Gestation.—Dr. Blacker: Deciduoma Malignum. Dr. Briggs: Primary Carcinoma of Fallopian Tube. The President (Dr. Malins of Birmingham): Annual Address.

THURSDAY (4th).—NEUROLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Annual General Meeting. Dr. S. J. Sharkey: Presidential Address.

RÖNTGEN SOCIETY (20, Hanover-square, W.).—8.30 P.M. Discussion on Production of Photographic Reversal through the Action of Various Radiations.

FRIDAY (5th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Mr. C. Ryall: The Surgical Treatment of Appendicitis.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith, W.).—8.30 P.M. Paper:—Dr. S. West: Some Points in Functional Albuminuria.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Clinical Evening. Communications by the President, Dr. Luke, and Dr. McCardie.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens will be shown by Dr. E. S. Yonge, Mr. A. H. Burt, and others

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (1st).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Saunders: Examination of the Stomach and Gastric Contents.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. E. G. Little: Clinique. (Skin.) 5.15 P.M. Dr. A. Morison: On the Treatment of the Muscular Factor in Cardiac Failure.

TUESDAY (2nd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. C. Williams: X Rays (illustrated by lantern slides).

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Sir W. H. Broadbent: Clinique. (Medical.) 5.15 P.M. Mr. W. Stuart-Low: Mucous Membranes, Normal and Abnormal.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Taylor: Myasthenia Gravis.

WEDNESDAY (3rd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Russell: Pneumonia.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Clarke: Clinique. (Surgical.) 5.15 P.M. Dr. T. H. Green: The Treatment of Pneumonia.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Fowler: The Treatment of Thoracic Aneurysm by Gelatine Injections.

THURSDAY (4th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. S. Edwards: Tuberculosis of the Bladder.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M. Mr. E. Clarke: Errors of Refraction, their Diagnosis and Treatment.

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road, N.W.).—3 P.M. Mr. A. Doran: Cases from the Wards.

CHARING CROSS HOSPITAL.—4 P.M. Dr. Galloway: Demonstration of Dermatological Cases. (Post-Graduate Course.)

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—5 P.M. Dr. G. Johnston: Fibrosis of the Lungs, II. (with cases). (Post-Graduate Course.)

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.). 6.15 P.M. Dr. M. Dockrell: Syphilis. (Chesterfield Lecture.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Kellock: Affections at and About the Umbilicus.

COUNCIL OF LEGAL EDUCATION (Old Hall, Lincoln's Inn).—8 P.M. Dr. F. J. Waldo: Medical Jurisprudence. Lecture IV.—Insanity in its Medico-legal Aspects.

FRIDAY (5th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Abraham: Skin Cases.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. E. Waggett: Clinique. (Ear.)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Ferrier: Cerebral Tumours.

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Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1903, which was completed with the issue of Dec. 26th, were given in THE LANCET of Jan. 2nd, 1904.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1903 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 28th, 1904.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Jan. 22	30·67	N.E.	...	54	42	33	33	34	Cloudy
,, 23	30·61	SSW	...	37	37	33	35	35	Foggy
,, 24	30 33	S.E.	...	37	34	32	32	34	Overcast
,, 25	30·16	S.W.	...	41	41	32	32	34	Overcast
,, 26	30 01	S.	...	69	49	33	40	41	Fine
,, 27	29 78	S W.	0·02	52	52	41	48	49	Squally
,, 28	29·69	S.W.	0 17	50	49	48	48	49	Raining

During the week marked copies of the following newspapers have been received: *Aberdeen Free Press, Aberdeen Free Press (Weekly), Westminster Gazette, Hertfordshire Mercury, Windsor and Eton Express, South Wales Daily News, East Anglian Daily Times, Walsall Advertiser, Surrey Advertiser, Reading Mercury, Mining Journal, Local Government Chronicle, Yorkshire Herald, Daily News, Daily Chronicle, Standard, Liverpool Post, St. Mary's Hospital Gazette, &c.*

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